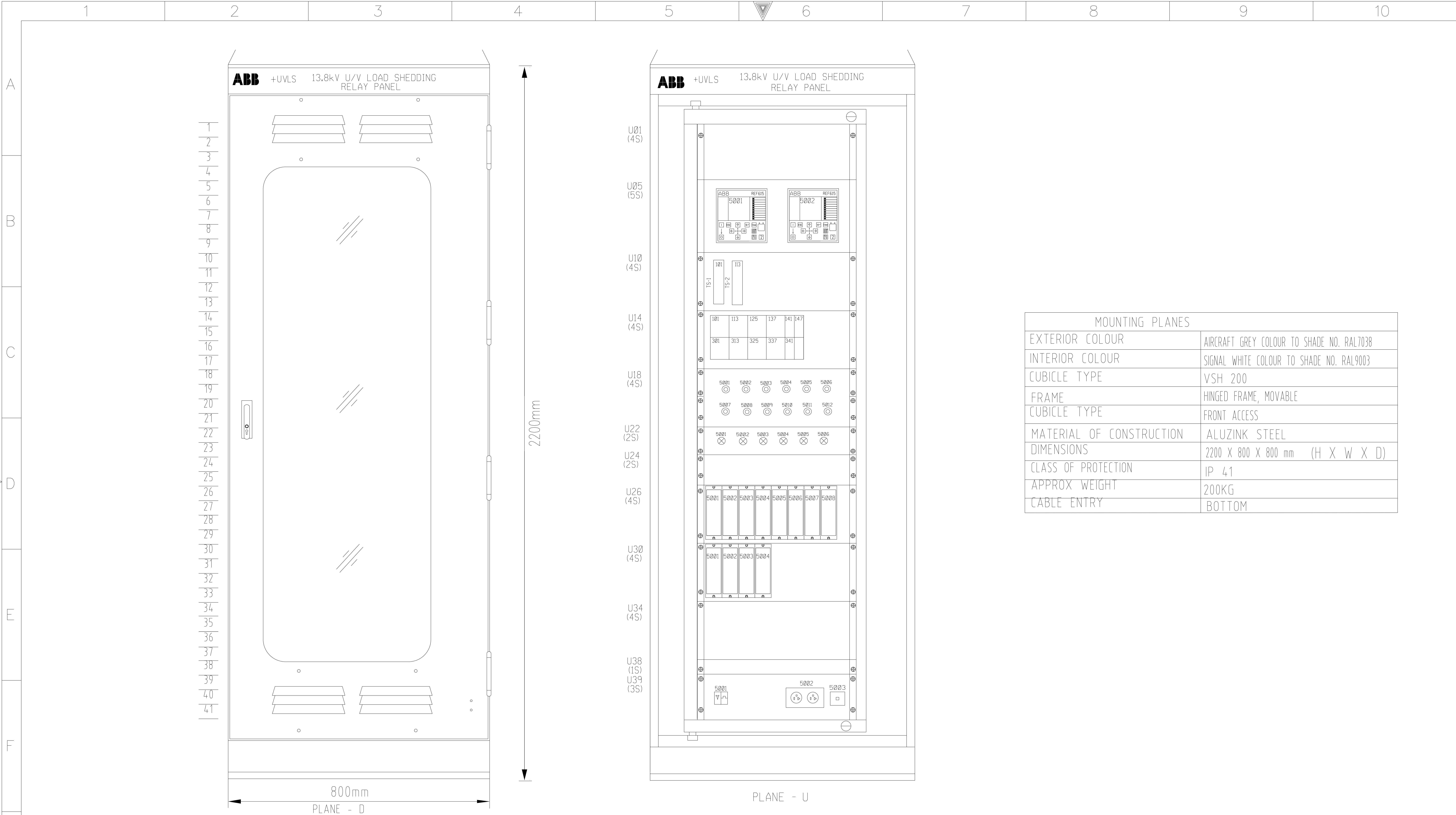


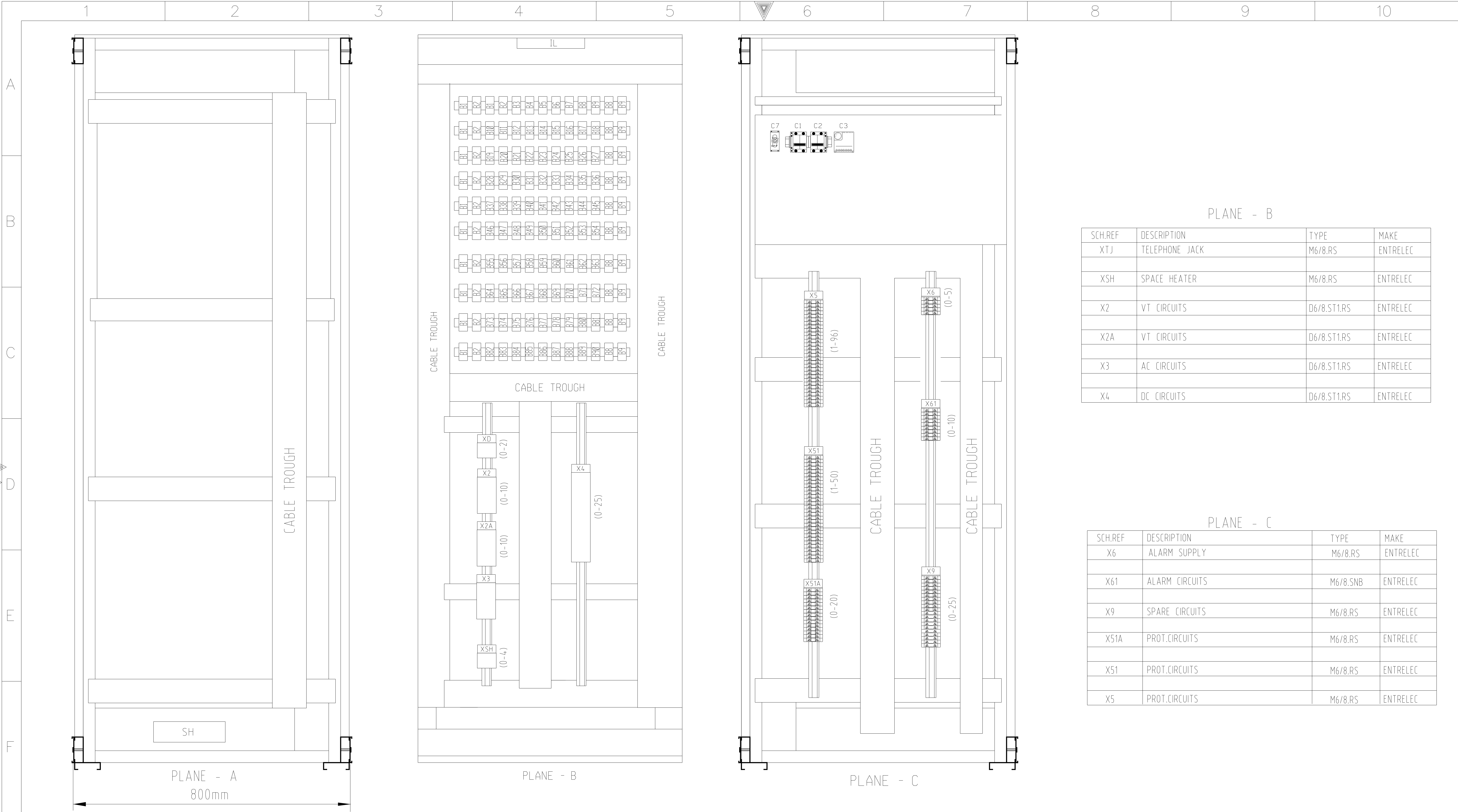
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A	<div>ABB</div> <div>POWER SYSTEMS NETWORK MANAGEMENT</div> <div>PROTECTION AND SUBSTATION AUTOMATION SYSTEMS</div> <div>WBS NO: S-13656</div>					<div>ABB AUTOMATION COMPANY LTD.,</div> <div>414, AL-KHARJ ROAD</div> <div>SECOND INDUSTRIAL CITY</div> <div>RIYADH-11383 K.S.A</div>																																																											
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C	<div>CONTRACTOR : ABB Contracting Company</div> <div>CLIENT : National Grid sa</div>																																																																
D	<div>PROJECT : CONSTRUCTION OF NEW 132/13.8kV SS 8709 IN AL-KHARJ CITY</div> <div>SUBSTATION : S/S 8709</div>																																																																
E	<div>CONTRACT NO. : 11131113/00</div> <div>TITLE : ASSEMBLY DRAWINGS +UVLS</div> <div>(UNDER VOLTAGE LOAD SHEDDING PANEL)</div>																																																																
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ASSEMBLY DRAWING	
13.8kV UV LOAD SHEDDING PANEL +UVLS	
S/S 8709 - 132/13.8KV IN AL-KHARJ CITY	
RIYADH	SAUDI ARABIA


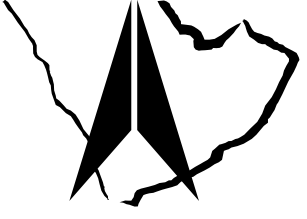
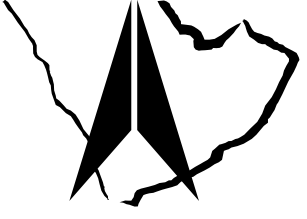
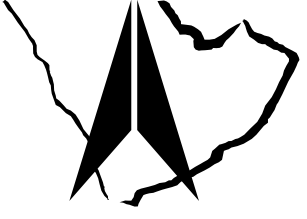
الشركة الوطنية لنقل الكهرباء National Grid sa				
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-	C421	CD-322967	SHT	CONT.
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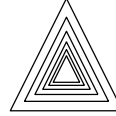


PLANE - B			
SCH.REF	DESCRIPTION	TYPE	MAKE
XTJ	TELEPHONE JACK	M6/8.RS	ENTRELEC
XSH	SPACE HEATER	M6/8.RS	ENTRELEC
X2	VT CIRCUITS	D6/8.ST1.RS	ENTRELEC
X2A	VT CIRCUITS	D6/8.ST1.RS	ENTRELEC
X3	AC CIRCUITS	D6/8.ST1.RS	ENTRELEC
X4	DC CIRCUITS	D6/8.ST1.RS	ENTRELEC

PLANE - C			
SCH.REF	DESCRIPTION	TYPE	MAKE
X6	ALARM SUPPLY	M6/8.RS	ENTRELEC
X61	ALARM CIRCUITS	M6/8.SNB	ENTRELEC
X9	SPARE CIRCUITS	M6/8.RS	ENTRELEC
X51A	PROT.CIRCUITS	M6/8.RS	ENTRELEC
X51	PROT.CIRCUITS	M6/8.RS	ENTRELEC
X5	PROT.CIRCUITS	M6/8.RS	ENTRELEC

G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		ASSEMBLY DRAWING		<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>				
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	01	13 25	AS PER SEC COMMENTS		DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY						
	00	13 04	FOR APPROVAL		OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC		RIYADH SAUDI ARABIA						
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DMS

VECTOR

NG/D2-D (2012/01)

NGD200

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A												
	SR.NO.	LOCATION REF.	SCH.REF.	D E S C R I P T I O N		SHEET.NO.	QTY.	TYPE	MAKE	ORDERING INFORMATION		
				RELAY PANEL +UVLS ACCOMMODATING THE FOLLOWING			1	VSH.200	AUT			
	1	U05.5001 U05.5002	27UV1 27UV2	NUMERICAL UNDERVOLTAGE PROTECTION RELAY WITH FOLLOWING SPECIFICATIONS		SH.301 SH.301A	2	REF615	ABB	HBF JAEAG NEA1 BAA11E		
B				RATED FREQUENCY : 50/60Hz								
				AUXILIARY VOLTAGE U : 48-250V DC/100-240V AC 50-60Hz								
	2	U10.101 U10.113	TS-1 TS-2	TEST SWITCH		SH.221 SH.221A	2	RTXP18	ABB	RK926 115-AN		
	3	U14.137 U14.337	194AX1 296AX1	BISTABLE RELAY FOR VT CHANGE OVER AUX. VOLTAGE : 110-125V DC		SH.221B SH.221C	2	RXMB2	ABB	1MRK 251 204-AP		
C				CONTACT DATA : 4NO + 4NC								
	4	U14.155 U14.349	194AX 296AX	AUX RELAY FOR VT CHANGE OVER AUX. VOLTAGE : 110-125V DC		SH.221B SH.221C	2	RXMB1	ABB	1MRK 000 804-AN		
D				CONTACT DATA : 2NO + 1NC PER COIL								
E												
F												
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS		<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>			
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	00	13 04	FOR APPROVAL		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA					
	REV. NO.	DATE	DESCRIPTION				INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.	
							-	C421	CD-322967	SHT L01	CONT. L02	02

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	13	U28.5005 U28.5006 U28.5007 U28.5008	94-21 94-22 94-23 94-24	STAGE 2 TRIP OUTPUT RELAY WITH FOLLOWING DETAILS AUX. VOLTAGE : 110/125V DC CONTACT DATA : 10 NO, SELF RESET HAND RESET FLAG "TRIP UNIT (94AUV2B)"	SH.226	4	MVAJ101	ALSTOM	MVAJ101RA0800A																																																
14	U30.5001 U30.5002 U30.5003 U30.5004	94-31 94-32 94-33 94-34	STAGE 3 TRIP OUTPUT RELAY WITH FOLLOWING DETAILS AUX. VOLTAGE : 110/125V DC CONTACT DATA : 10 NO, SELF RESET HAND RESET FLAG "TRIP UNIT (94AUV2C)"	SH.227	4	MVAJ101	ALSTOM	MVAJ101RA0800A																																																	
E	<table><tr><td>15</td><td>U22.5001 U22.5002 U22.5003 U22.5004 U22.5005 U22.5006</td><td>L01 L02 L03 L04 L05 L06</td><td>UV LOAD SHED OUT INDICATIONS 27UV1-STG-1 27UV1-STG-2 27UV1-STG-3 27UV2-STG-1 27UV2-STG-2 27UV2-STG-3</td><td>SH.223 SH.223A SH.223B SH.223C SH.223D SH.223E</td><td>6</td><td>ML1-100C MCBH-003 1-A2 2145</td><td>ABB</td><td>1SFA 611 400 R1002 1SFA 611 605 R1400 1SFA 616 921 R2145</td></tr></table>										15	U22.5001 U22.5002 U22.5003 U22.5004 U22.5005 U22.5006	L01 L02 L03 L04 L05 L06	UV LOAD SHED OUT INDICATIONS 27UV1-STG-1 27UV1-STG-2 27UV1-STG-3 27UV2-STG-1 27UV2-STG-2 27UV2-STG-3	SH.223 SH.223A SH.223B SH.223C SH.223D SH.223E	6	ML1-100C MCBH-003 1-A2 2145	ABB	1SFA 611 400 R1002 1SFA 611 605 R1400 1SFA 616 921 R2145																																						
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	F	<table><tr><td></td><td></td><td></td><td>LENS:WHITE LED: 110-130V,4-6MA HOLDER RATING:115V WITH RESISTOR DIODE BLOCK</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>													LENS:WHITE LED: 110-130V,4-6MA HOLDER RATING:115V WITH RESISTOR DIODE BLOCK																																										
				LENS:WHITE LED: 110-130V,4-6MA HOLDER RATING:115V WITH RESISTOR DIODE BLOCK																																																					
G	<table><tr><td colspan="3">AS-BUILT BY _____ DATE _____</td><td colspan="2">CONTRACT NO. 11131113/00</td><td colspan="2">JOB ORDER NO. S-13656</td><td colspan="3">LIST OF APPARATUS</td><td colspan="2" rowspan="2"><div>الشركة الوطنية لنقل الكهرباء</div><div>نقل الكهرباء</div><div>National Grid sa</div></td></tr><tr><td>02</td><td>13 48</td><td>AS MANUFACTURED</td><td colspan="2">DRAWN BY RIZ CHECKED BY KVR</td><td colspan="3">13.8kv UV LOAD SHEEDING PANEL +UVLS</td></tr><tr><td>01</td><td>13 25</td><td>AS PER SEC COMMENTS</td><td colspan="2">DATE STARTED 24.01.2013 DATE COMPLETED _____</td><td colspan="3">S/S 8709 - 132/13.8KV IN AL-KHARJ CITY</td><td>INDEX</td><td>PLANT NO.</td><td>DRAWING NUMBER</td><td>SHEET NO.</td><td>REV. NO.</td></tr><tr><td>00</td><td>13 04</td><td>FOR APPROVAL</td><td colspan="2">OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC</td><td colspan="3">RIYADH SAUDI ARABIA</td><td>-</td><td>C421</td><td>CD-322967</td><td>SHT L03</td><td>CONT. L04</td><td>02</td></tr></table>										AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS			<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>		02	13 48	AS MANUFACTURED	DRAWN BY RIZ CHECKED BY KVR		13.8kv UV LOAD SHEEDING PANEL +UVLS			01	13 25	AS PER SEC COMMENTS	DATE STARTED 24.01.2013 DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY			INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.	00	13 04	FOR APPROVAL	OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA			-	C421	CD-322967	SHT L03	CONT. L04	02
	AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS			<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>																																														
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A												
	SR. NO.	LOCATION REF.	SCH. REF.	D E S C R I P T I O N				SHEET. NO.	QTY.	TYPE	MAKE	ORDERING INFORMATION
	16	U39.5001	Q1	MCB 2 POLE 6A, FOR DC SUPPLY WITH 2NC AUX. CONTACT UVLS± SUPPLY				SH.216	1	S282UCK6	ABB	S282UC-K6+S2-H11
	17	U39.5002	C01	CONVENIENCE OUTLET 10A, 127V AC				SH.211	1	LEGRAND	COMBINATION	58901
			C02	CONVENIENCE OUTLET 10A, 220V AC								
	18	U39.5003	TJ	TELEPHONE JACK 1GANG 4WIRE				SH.211	1	EDF410		EDF410
	19			STAGE-1,2&3 TRIP ISOLATION LINKS FOR FOLLOWING 13.8KV FEEDERS				SH.228-235	90	RS 20	GEC	-
		B1,B2,B3	1LKH23,2LKH23,3LKH23	CB S2305				SH.228				
		B4,B5,B6	1LKH21,2LKH21,3LKH21	CB S2105				SH.228				
		B7,B8,B9	1LKH19,2LKH19,3LKH19	CB S1905				SH.228				
		B10,B11,B12	1LKH17,2LKH17,3LKH17	CB S1705				SH.228				
		B13,B14,B15	1LKH15,2LKH15,3LKH15	CB S1505				SH.229				
		B16,B17,B18	1LKH11,2LKH11,3LKH11	CB S1105				SH.229				
		B19,B20,B21	1LKH9,2LKH9,3LKH9	CB S905				SH.229				
		B22,B23,B24	1LKH7,2LKH7,3LKH7	CB S705				SH.229				
		B25,B26,B27	1LKH5,2LKH5,3LKH5	CB S505				SH.230				
		B28,B29,B30	1LKH3,2LKH3,3LKH3	CB S305				SH.230				
		B31,B32,B33	1LKH2,2LKH2,3LKH2	CB S205				SH.230				
		B34,B35,B36	1LKH4,2LKH4,3LKH4	CB S405				SH.230				
		B37,B38,B39	1LKH6,2LKH6,3LKH6	CB S605				SH.231				
		B40,B41,B42	1LKH8,2LKH8,3LKH8	CB S805				SH.231				
		B43,B44,B45	1LKH10,2LKH10,3LKH10	CB S1005				SH.231				
		B46,B47,B48	1LKH14,2LKH14,3LKH14	CB S1405				SH.231				
		B49,B50,B51	1LKH16,2LKH16,3LKH16	CB S1605				SH.232				
		B52,B53,B54	1LKH18,2LKH18,3LKH18	CB S1805				SH.232				

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G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS		الشركة الوطنية لنقل الكهرباء National Grid sa	
	02	13 48	AS MANUFACTURED		DRAWN BY _____ RIZ _____ CHECKED BY _____ KVR		13.8kV UV LOAD SHEEDING PANEL +UVLS			
	01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013 DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY			
	00	13 04	FOR APPROVAL		OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC		RIYADH SAUDI ARABIA			
	REV. NO.	DATE	DESCRIPTION							

NG/D2-D (2012/01)

DMS

VECTOR

NGD200

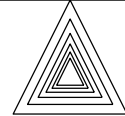
1			2		3		4		5		6		7		8		9		10	
A			LABEL REF.		LABEL ENGRAVING		MATERIALS		ENGRAVING		LABEL SIZE		LETTER SIZE							
			U05.5001		U05.5001 27UV1		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X15mm		4mm							
			U05.5002		U05.5002 27UV2		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X15mm		4mm							
			U10.101		U10.101 TS-1		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U10.113		U10.113 TS-2		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.101		U14.101 K01		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.113		U14.113 K02		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.125		U14.125 K03		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.141		U14.141 74UV		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.301		U14.301 K03		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.313		U14.313 K04		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.325		U14.325 K06		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
B			U14.137		U14.137 194A1		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.337		U14.337 296AX1		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.147		U14.341 194AX		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U14.341		U14.5003 296AX		ALUMINUM PAPER FOIL		BLACK LETTERS		50X15mm		3mm							
			U18.5001		U18.5001 S01		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X15mm		4mm							
			U18.5002		U18.5002 S02		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X15mm		4mm							
			U18.5003		U18.5003 S03		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X15mm		4mm							
			U18.5004		U18.5004 S04		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X15mm		4mm							
			U18.5005		U18.5005 S05		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X15mm		4mm							
			U18.5006		U18.5006 S06		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X15mm		4mm							
			U18.5007		U18.5007 S07		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X10mm		4mm							
			U18.5008		U18.5008 S08		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X10mm		4mm							
C			U18.5009		U18.5009 S09		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X10mm		4mm							
			U18.5010		U18.5010 S10		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X10mm		4mm							
			U18.5011		U18.5011 S11		TRAFOLITE		BLACK LETTERS ON WHITE BACKGROUND		50X10mm		4mm							
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AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS			<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء National Grid sa</div>							
02	13 48	AS MANUFACTURED		DRAWN BY _____ RIZ _____ CHECKED BY _____ KVR			13.8kV UV LOAD SHEEDING PANEL +UVLS										
01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013 DATE COMPLETED _____			S/S 8709 - 132/13.8KV IN AL-KHARJ CITY										
00	13 04	FOR APPROVAL		OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC			RIYADH SAUDI ARABIA										
REV. NO.	DATE	DESCRIPTION								INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.	
										-	C421	CD-322967		L07	L08	02	

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02	13 48	AS MANUFACTURED		DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u>		13.8kv UV LOAD SHEEDING PANEL +UVLS		INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
01	13 25	AS PER SEC COMMENTS		DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY					SHT	CONT.
00	13 04	FOR APPROVAL		OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>		RIYADH SAUDI ARABIA		-	C421	CD-322967	L08	L09
REV. NO.	DATE	DESCRIPTION										02

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VECTOR

NG/D2-D (2012/01)

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		REV. NO.	DATE	DESCRIPTION										

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A	<div><div></div><div><div>POWER SYSTEMS NETWORK MANAGEMENT</div><div>PROTECTION AND SUBSTATION AUTOMATION SYSTEMS</div><div>WBS NO: S-13656</div></div><div><div>ABB AUTOMATION COMPANY LTD.,</div><div>414, AL-KHARJ ROAD</div><div>SECOND INDUSTRIAL CITY</div><div>RIYADH-11383 K.S.A</div></div></div>																																																																
B																																																																	
C	<div>CONTRACTOR : ABB Contracting Company</div> <div>CLIENT : National Grid sa</div>																																																																
D	<div>PROJECT : CONSTRUCTION OF NEW 132/13.8kV SS 8709 IN AL-KHARJ CITY</div> <div>SUBSTATION : S/S 8709</div>																																																																
E	<div>CONTRACT NO. : 11131113/00</div> <div>TITLE : SCHEMATIC DRAWINGS +UVLS</div> <div>(UNDER VOLTAGE LOAD SHEDDING PANEL)</div>																																																																
F																																																																	
G	<table><tr><td colspan="3">AS-BUILT BY _____ DATE _____</td><td colspan="2">CONTRACT NO. 11131113/00</td><td colspan="2">JOB ORDER NO. S-13656</td><td colspan="2">CONTENTS SHEET</td><td colspan="2"><div>الشركة الوطنية لنقل الكهرباء</div><div> نقل الكهرباء National Grid sa</div></td></tr><tr><td>02</td><td>13 48</td><td>AS MANUFACTURED</td><td colspan="2">DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u></td><td colspan="2">13.8kV UV LOAD SHEEDING PANEL +UVLS</td><td colspan="2">13.8kV UV LOAD SHEEDING PANEL +UVLS</td><td colspan="2">INDEX PLANT NO. DRAWING NUMBER SHEET NO. REV. NO.</td></tr><tr><td>01</td><td>13 25</td><td>AS PER SEC COMMENTS</td><td colspan="2">DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____</td><td colspan="2">S/S 8709 - 132/13.8KV IN AL-KHARJ CITY</td><td colspan="2">S/S 8709 - 132/13.8KV IN AL-KHARJ CITY</td><td colspan="2">SHT CONT. REV. NO.</td></tr><tr><td>00</td><td>13 04</td><td>FOR APPROVAL</td><td colspan="2">OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u></td><td colspan="2">RIYADH SAUDI ARABIA</td><td colspan="2">- C421 CD-322968</td><td colspan="2">000001 02</td></tr><tr><td>REV. NO.</td><td>DATE</td><td>DESCRIPTION</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr></table>										AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		CONTENTS SHEET		<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>		02	13 48	AS MANUFACTURED	DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u>		13.8kV UV LOAD SHEEDING PANEL +UVLS		13.8kV UV LOAD SHEEDING PANEL +UVLS		INDEX PLANT NO. DRAWING NUMBER SHEET NO. REV. NO.		01	13 25	AS PER SEC COMMENTS	DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY		SHT CONT. REV. NO.		00	13 04	FOR APPROVAL	OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>		RIYADH SAUDI ARABIA		- C421 CD-322968		000001 02		REV. NO.	DATE	DESCRIPTION								
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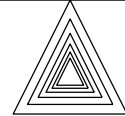
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CONTENTS			SHEET	REV.
COVER SHEET			000	01
CONTENT SHEET			001	01
CONTENT SHEET			002	01
GRAPHICAL SYMBOLS FOR DIAGRAMS			011	01
GRAPHICAL SYMBOLS FOR DIAGRAMS			012	01
COMMON LEGEND			013	01
DRAWING REFERENCES			015 & 016	01
LOGIC DIAGRAM			210	01
AC SUPPLY FOR ILLUMINATION & POWER SOCKET			211	01
CUB. LIGHTING, HEATER & SOCKET ALARM CKT.			212	01
DC SUPPLY DISTRIBUTION			216	01
VT CONNECTION - UNDER VOLTAGE RELAY			221	01
VT CONNECTION- UNDER VOLTAGE RELAY			221A	01
VT CHANGE OVER SCHEME 1A/1B			221B	01
VT CHANGE OVER SCHEME 2A/2B			221C	01
27UV1/27UV2 BINARY INPUT			222	01
27UV1/27UV2 BINARY INPUT			222A	01
LOAD SHEDDING IN/OUTY SELECTION-27UV1			223	01

CONTENTS			SHEET	REV.
LOAD SHEDDING IN/OUT SELECTION-27UV1			223A	01
LOAD SHEDDING IN/OUT SELECTION-27UV1			223B	01
LOAD SHEDDING IN/OUT SELECTION-27UV2			223C	01
LOAD SHEDDING IN/OUT SELECTION-27UV2			223D	01
LOAD SHEDDING IN/OUT SELECTION-27UV2			223E	01
TRIP RELAYS-STAGE-1			225	01
TRIP RELAYS-STAGE-2			226	01
TRIP RELAYS-STAGE-3			227	01
ST-1,2&3 -OUTPUT CONTACTS(H23,H21,H19,H17)			228	01
ST-1,2&3 -OUTPUT CONTACTS(H15,H13,H9,H7)			229	01
ST-1,2&3 -OUTPUT CONTACTS(H5,H3,H2,H4)			230	01
ST-1,2&3 -OUTPUT CONTACTS(H6,H8,H10,H14)			231	01
ST-1,2&3 -OUTPUT CONTACTS(H26,H28,H30,H32)			232	01
ST-1,2&3 -OUTPUT CONTACTS(H34,H36,H38,H40)			234	01
ST-1,2&3 -OUTPUT CONTACTS(H44,H48)			235	01
COMMON ALARM CONTACTS			290	01
SPARE CONTACTS			291	01
BLOCK REFERENCE			301	01
BLOCK REFERENCE			301A	01
TERMINAL BLOCK ALLOCATION			302	01

AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		CONTENTS SHEET			<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>				
02	13 48	AS MANUFACTURED		DRAWN BY RIZ CHECKED BY KVR			13.8kv UV LOAD SHEEDING PANEL +UVLS							
01	13 25	AS PER SEC COMMENTS					S/S 8709 - 132/13.8KV IN AL-KHARJ CITY							
00	13 04	FOR APPROVAL		DATE STARTED 24.01.2013 DATE COMPLETED _____			RIYADH SAUDI ARABIA							
REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC			INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.	
							-	C421	CD-322968		SHT 001	CONT. 011	02	

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G	AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		GRAPHICAL SYMBOLS FOR DIAGRAMS		<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>		
	02	13 48	AS MANUFACTURED	DRAWN BY <u> RIZ </u> CHECKED BY <u> KVR </u>		13.8kV UV LOAD SHEEDING PANEL +UVLS						
	01	13 25	AS PER SEC COMMENTS	DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY						
	00	13 04	FOR APPROVAL	OPRG. DEPT. <u> CTPD </u> ENG. DEPT. <u> AUT-PSAC </u>		RIYADH SAUDI ARABIA						
	REV. NO. DATE DESCRIPTION							INDEX PLANT NO. DRAWING NUMBER SHEET NO. REV. NO.				
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FORMS)</td><td colspan="2"></td><td colspan="2">POSITION INDICATOR</td><td colspan="2"></td><td colspan="2">AND-ELEMENT WITH TWO INPUTS</td></tr><tr><td colspan="2"></td><td colspan="2">SINGLE-PHASE TRANSFORMER WITH FERRO MAGNETIC CORE</td><td colspan="2"></td><td colspan="2">SYNCHROSCOPE</td><td colspan="2"></td><td colspan="2">OR-ELEMENT WITH TWO INPUTS</td></tr><tr><td colspan="2"></td><td colspan="2">SINGLE-PHASE VOLTAGE TRANSFORMER (MULTI-LINE AND SINGLE-LINE REPRESENTATION)</td><td colspan="2"></td><td colspan="2">RECORDING VOLTMETER</td><td colspan="2"></td><td colspan="2">LOGIC THRESHOLD ELEMENT WITH FOUR INPUTS AND THRESHOLD VALUE 2</td></tr><tr><td colspan="2"></td><td colspan="2">SINGLE-PHASE VOLTAGE TRANSFORMER WITH TWO SECONDARY WINDINGS (MULTI-LINE AND SINGLE-LINE REPRESENTATION)</td><td colspan="2"></td><td colspan="2">RECORDING WATTMETER</td><td colspan="2"></td><td colspan="2">ELEMENT WITH THREE INPUTS FOR "2 AND ONLY 2"</td></tr><tr><td colspan="2"></td><td 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colspan="2"></td><td colspan="2">HIGH-PASS FILTER</td><td colspan="2"></td><td colspan="2">ELEMENT WITH STATIC NEGATED OUTPUT</td><td colspan="2"></td><td colspan="2">NAND ELEMENT WITH TWO INPUTS</td></tr><tr><td colspan="2"></td><td colspan="2">BAND-PASS FILTER</td><td colspan="2"></td><td colspan="2">ELEMENT WITH DYNAMIC INPUT</td><td colspan="2"></td><td colspan="2">NOR ELEMENT WITH TWO INPUTS</td></tr><tr><td colspan="2"></td><td colspan="2">VOLTMETER</td><td colspan="2"></td><td colspan="2">ELEMENT WITH DYNAMIC NEGATED INPUT</td><td colspan="2"></td><td colspan="2">BISTABLE ELEMENT</td></tr><tr><td colspan="2"></td><td colspan="2">AMMETER</td><td colspan="2"></td><td colspan="2">ELEMENT WITH INHIBITING INPUT</td><td colspan="2"></td><td colspan="2"></td></tr></table>																				SYMBOL		DESCRIPTION		SYMBOL		DESCRIPTION		SYMBOL		DESCRIPTION				FUSE / LINK				WATTMETER				ELEMENT WITH NEGATED INHIBITING INPUT				FUSE WITH THE SUPPLY SIDE INDICATED				VARMETER				ELEMENT WITH 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A	LEGENDS											
B	*R1	DC SUPPLY - MAIN PROTECTION / TCS				ON	CB NORMALLY OPEN AUXILIARY CONTACT					
	*R2	DC SUPPLY - SECONDARY PROTECTION / TCS				OFF	CB NORMALLY CLOSED AUXILIARY CONTACT					
	*R3	DC SUPPLY - BACK UP PROTECTION				A	COMMON					
	*IT	DC SUPPLY - INTER TRIP				T	TEST POSITION					
B	*S1	DC SUPPLY - ALARM UNIT - 1				S	SERVICE POSITION					
	*S2	DC SUPPLY - ALARM UNIT - 2				CS	CLOSE IN SERVICE POSITION					
	*S3	DC SUPPLY - ALARM UNIT - 3										
	*S4	DC SUPPLY - ALARM UNIT - 4										
C	ISC*	DC SUPPLY - INDICATIONS IN CONTROL PANEL				CT	CLOSE IN TEST POSITION					
	ISCL	DC SUPPLY - LAMP TEST IN CONTROL PANEL				LS	LOCAL SERVICE					
	ISR*	DC SUPPLY - INDICATIONS IN RELAY PANEL				LT	LOCAL TEST					
	ISRL	DC SUPPLY - LAMP TEST IN RELAY PANEL				LC	LOCAL CLOSE					
C	FL	DC SUPPLY - FLASHING CIRCUIT				LO	LOCAL OPEN					
	BB RS*	DC SUPPLY - BUS BAR - PROTECTION RESET				RO	REMOTE OPEN					
	BB CBF*/CBF*	DC SUPPLY - CBF PROTECTION										
	FR1*	DC SUPPLY - FAULT RECORDER - 1										
D	FR2*	DC SUPPLY - FAULT RECORDER - 2										
	ANN*	DC SUPPLY - ALARM UNITS										
	AD	ACKNOWLEDGE BUS - ALARM SYSTEM										
	R	RESET BUS - ALARM SYSTEM										
D	CR	CONTROL ROOM										
	ECC	ENERGY CONTROL CENTRE										
	LOCAL	THE LOCATION OF CONTROLLED DEVICE										
	REMOTE	ANY OTHER LOCATION NOT LOCAL										
E	XECC	CB / ISOLATOR ZYX - CONTROL COMMON TO SCADA										
	XECCC	CB / ISOLATOR ZYX - CONTROL CLOSE FROM SCADA										
	XECCO	CB / ISOLATOR ZYX - CONTROL OPEN FROM SCADA										
	XCR	CB / ISOLATOR ZYX - OPERATION FROM CONTROL ROOM										
E	XRC	CB / ISOLATOR ZYX - CLOSE FROM REMOTE										
	XRO	CB / ISOLATOR ZYX - OPEN FROM REMOTE										
	XRCT	CB ZYX - REMOTE CLOSE "TEST" POSITION										
	XRCS	CB ZYX - REMOTE CLOSE "SERVICE" POSITION										
F	XRO	CB ZYX - REMOTE OPEN										
	XCRO	CB ZYX - OPEN FROM CONTROL ROOM										
	XCRC	CB ZYX - CLOSE FROM CONTROL ROOM										
		(ZYX - DENOTES DEVICE NO e.g. 134,136 OR 130 ETC. Ex: 34ECCC DENOTES CLOSING OF ISOLATOR 134 FROM SCADA) 30CRC DENOTES CB 130 CLOSE COMMAND FROM CONTROL ROOM)										
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COMMON LEGEND			<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>		
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REV. NO.	DATE	DESCRIPTION																	

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G	<table><tr><td colspan="3">AS-BUILT BY _____ DATE _____</td><td colspan="2">CONTRACT NO. 11131113/00</td><td colspan="2">JOB ORDER NO. S-13656</td><td colspan="3">DRAWING REFERENCES</td><td colspan="2"><div>الشركة الوطنية لنقل الكهرباء</div><div>نقل الكهرباء</div><div>National Grid sa</div></td></tr><tr><td rowspan="4"></td><td>02</td><td>13 48</td><td colspan="2">AS MANUFACTURED</td><td colspan="2">DRAWN BY RIZ CHECKED BY KVR</td><td colspan="3">13.8kv UV LOAD SHEEDING PANEL +UVLS</td><td>INDEX</td><td>PLANT NO.</td><td>DRAWING NUMBER</td><td colspan="2">SHEET NO. REV. NO.</td></tr><tr><td>01</td><td>13 25</td><td colspan="2">AS PER SEC COMMENTS</td><td colspan="2">DATE STARTED 24.01.2013 DATE COMPLETED</td><td colspan="3">S/S 8709 - 132/13.8KV IN AL-KHARJ CITY</td><td rowspan="3">-</td><td rowspan="3">C421</td><td rowspan="3">CD-322968</td><td>SHT</td><td>CONT.</td><td rowspan="3">02</td></tr><tr><td>00</td><td>13 04</td><td colspan="2">FOR APPROVAL</td><td colspan="2">OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC</td><td colspan="3">RIYADH SAUDI ARABIA</td><td>016</td><td>210</td></tr><tr><td>REV. NO.</td><td>DATE</td><td colspan="2">DESCRIPTION</td><td colspan="3"></td><td colspan="3"></td></tr></table>										AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		DRAWING REFERENCES			<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>			02	13 48	AS MANUFACTURED		DRAWN BY RIZ CHECKED BY KVR		13.8kv UV LOAD SHEEDING PANEL +UVLS			INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO. REV. NO.		01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013 DATE COMPLETED		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY			-	C421	CD-322968	SHT	CONT.	02	00	13 04	FOR APPROVAL		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA			016	210	REV. NO.	DATE	DESCRIPTION							
AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		DRAWING REFERENCES			<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>																																																															
	02	13 48	AS MANUFACTURED		DRAWN BY RIZ CHECKED BY KVR		13.8kv UV LOAD SHEEDING PANEL +UVLS			INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO. REV. NO.																																																												
	01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013 DATE COMPLETED		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY			-	C421	CD-322968	SHT	CONT.	02																																																										
	00	13 04	FOR APPROVAL		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA						016	210																																																											
	REV. NO.	DATE	DESCRIPTION																																																																						



PROTECTION & SUBSTATION
AUTOMATION

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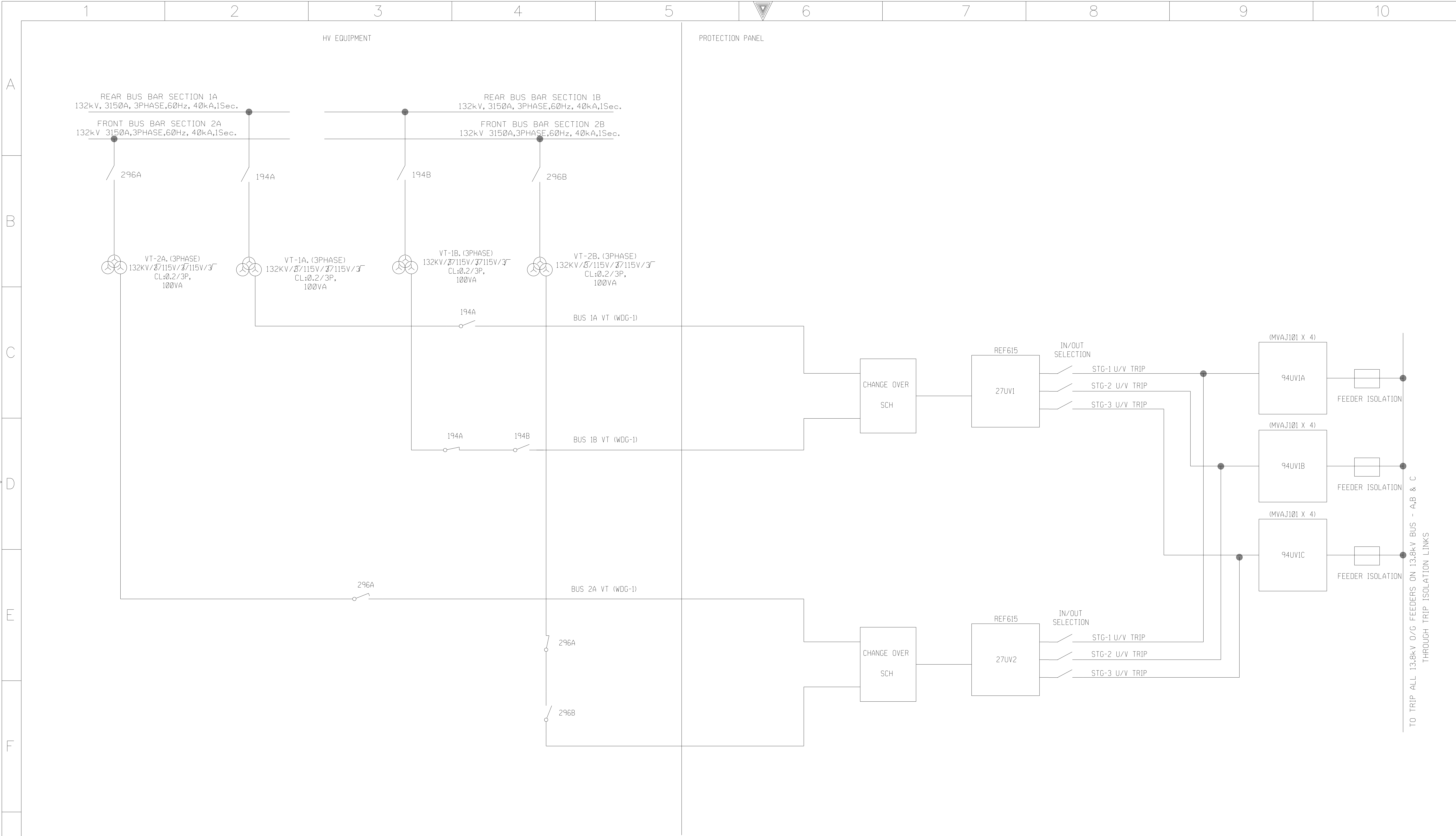


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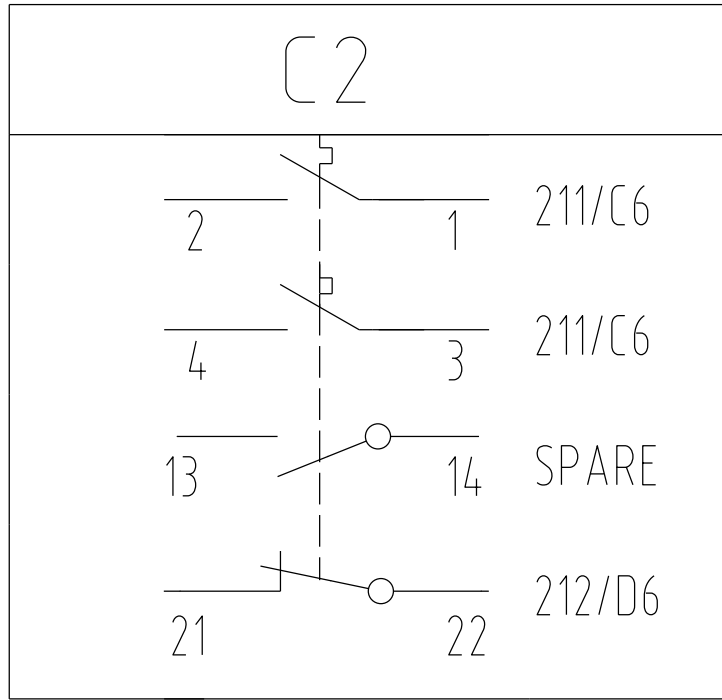
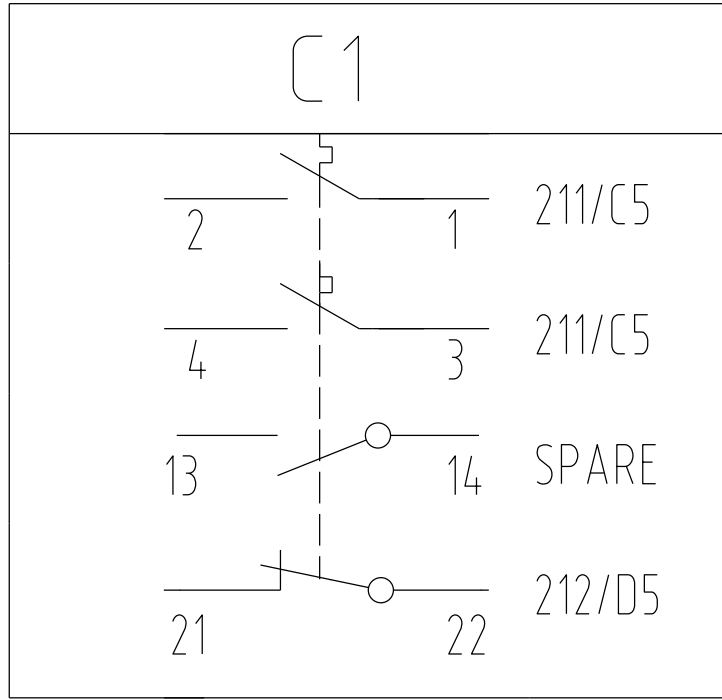
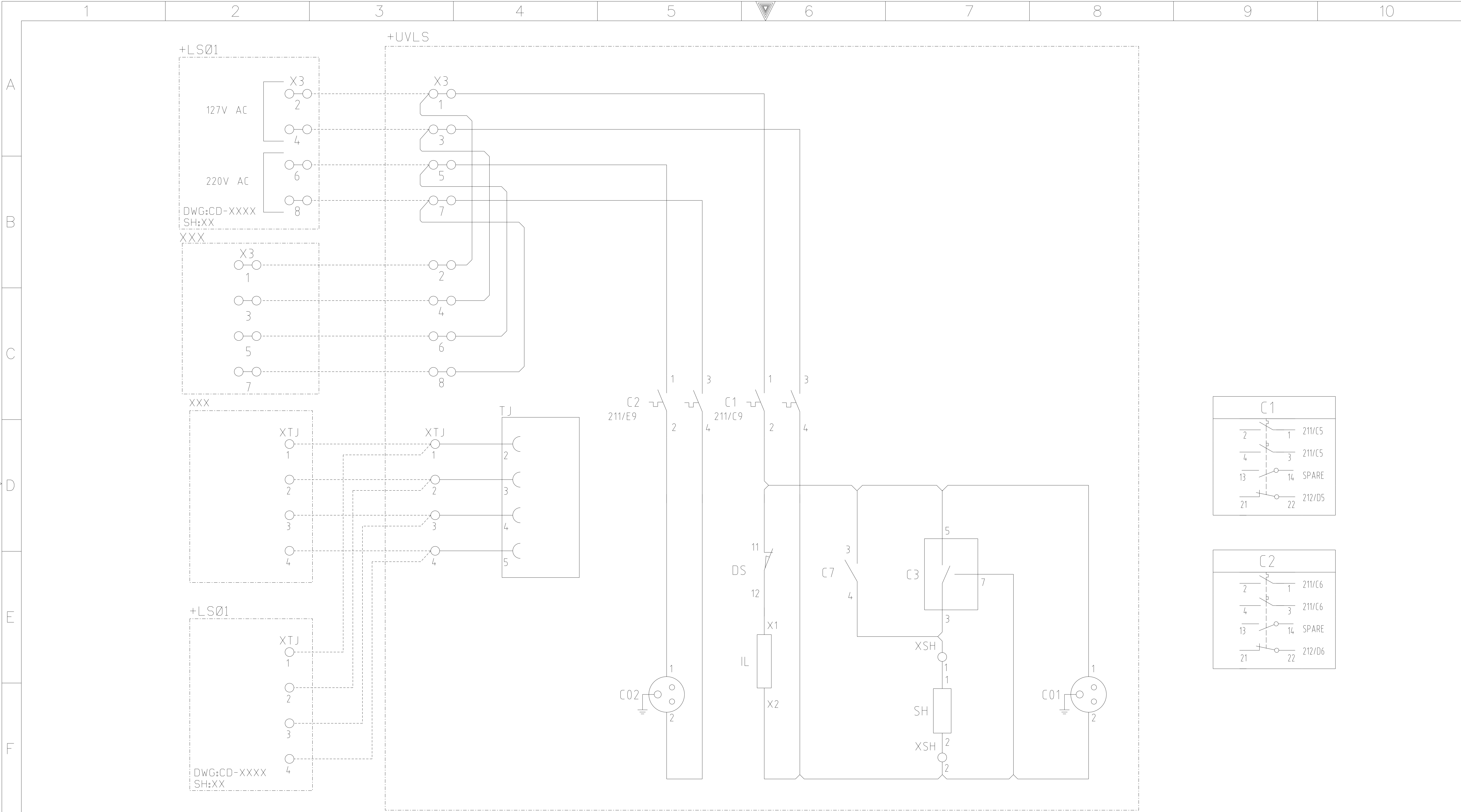
VECTOR


NG/D2-D (2012/01)

NGD200



G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LOGIC DIAGRAMS		<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>					
	02	13 48	AS MANUFACTURED		DRAWN BY _____ RIZ _____ CHECKED BY _____ KVR		13.8kV UV LOAD SHEEDING PANEL +UVLS							
	01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013 DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY							
	00	13 04	FOR APPROVAL		OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC		RIYADH SAUDI ARABIA							
	REV. NO.	DATE	DESCRIPTION						INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.	
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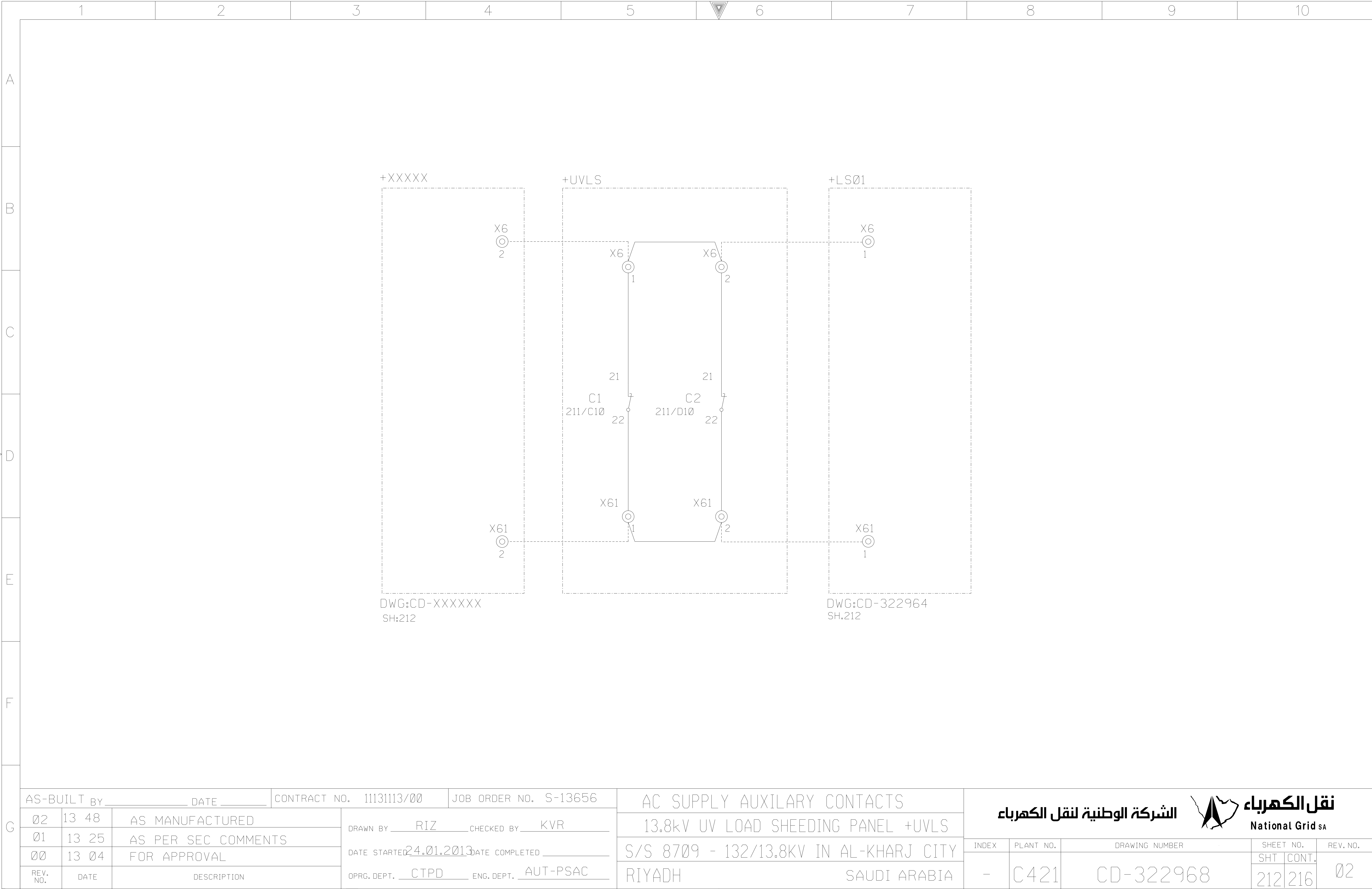
G	AS-BUILT BY _____		DATE _____	CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		AC SUPPLY FOR ILLUMINATION & POWER SOCKET		<div><div>الشركة الوطنية لنقل الكهرباء</div><div>نقل الكهرباء</div><div>National Grid sa</div></div>						
	02	13 48	AS MANUFACTURED		DRAWN BY RIZ		CHECKED BY KVR		13.8kv UV LOAD SHEEDING PANEL +UVLS							
	01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013		DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY							
	00	13 04	FOR APPROVAL		OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA							
	REV. NO.	DATE	DESCRIPTION								INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.	
										-	C421	CD-322968		SHT 211	CONT. 212	02

NG/D2-D (2012/01)

DMS

VECTOR

NGD200



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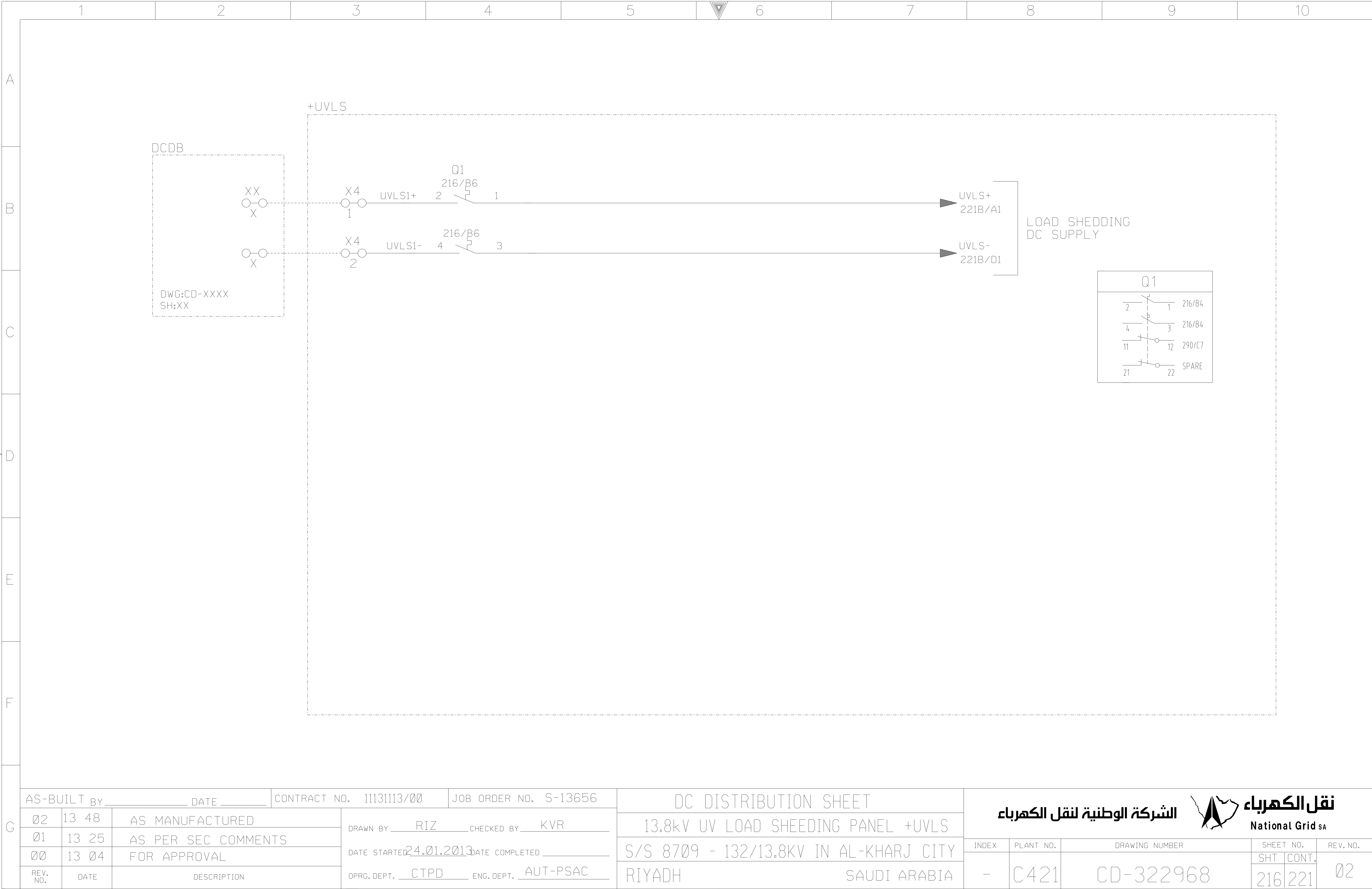


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VECTOR

NGD200

NG/D2-D (2012/01)

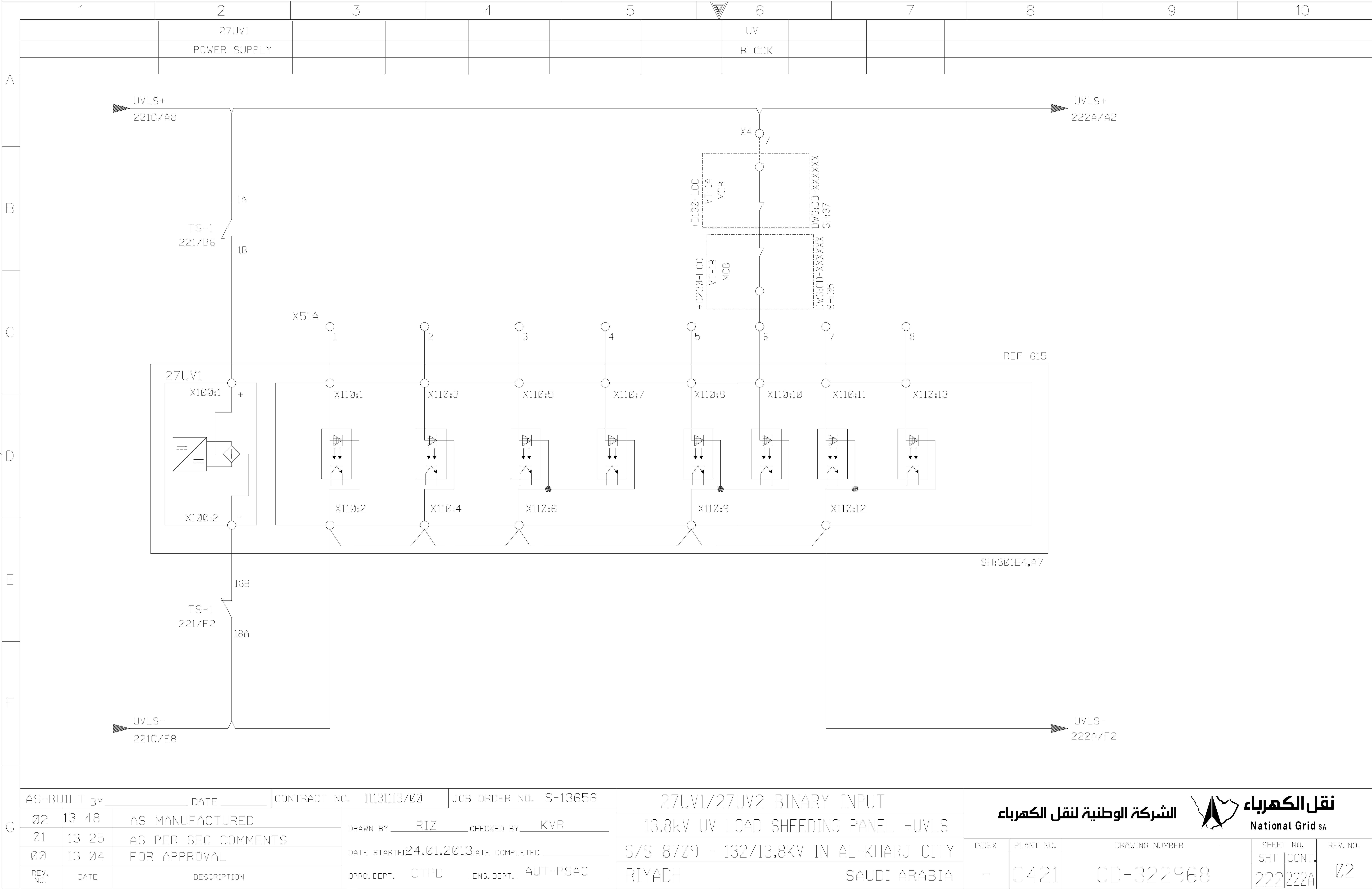


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NG/D2-D (2012/01)

DMS VECTOR

NGD200



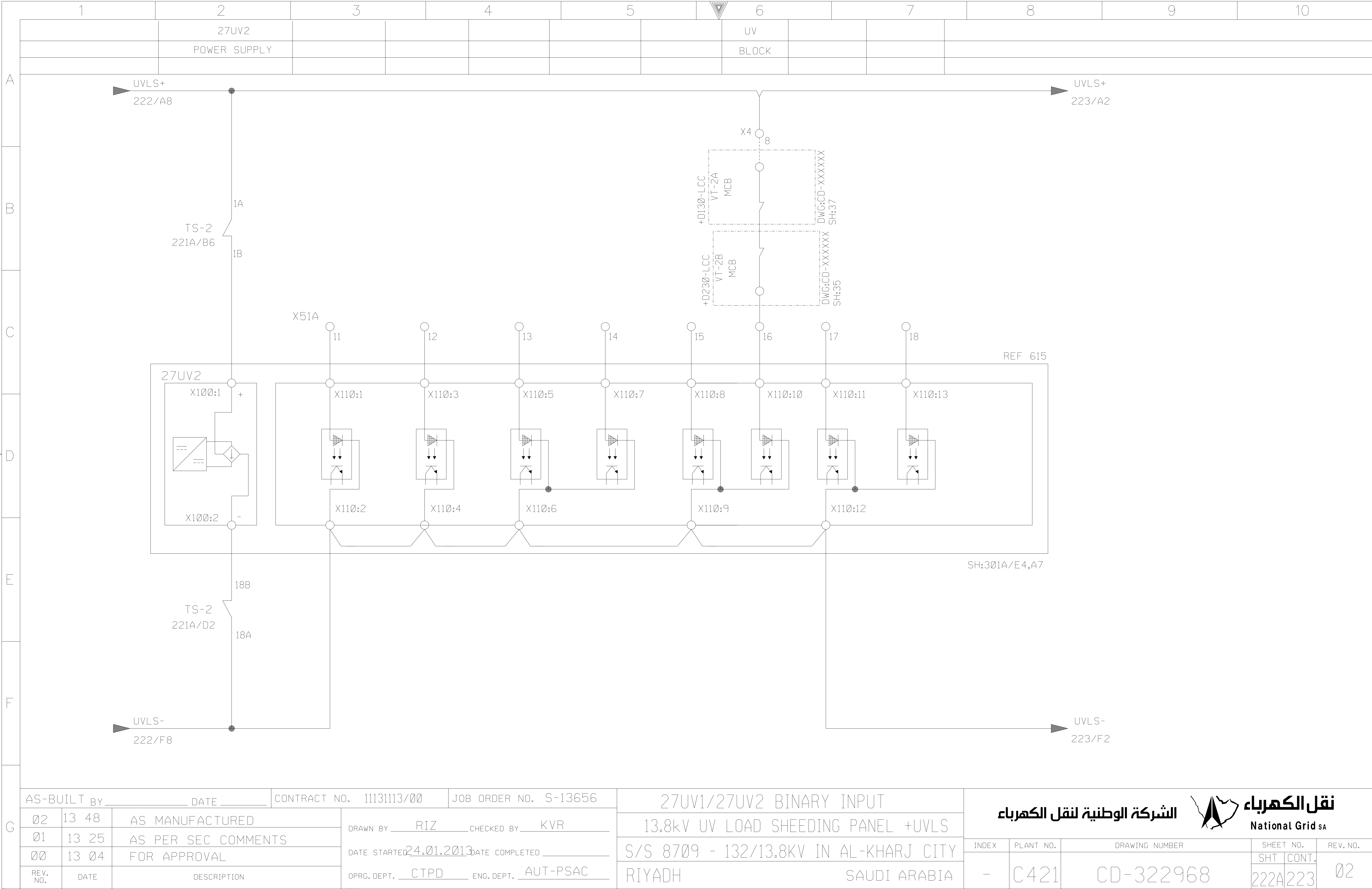
AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131113/00 JOB ORDER NO. S-13656

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01	13 25	AS PER SEC COMMENTS
00	13 04	FOR APPROVAL
REV. NO.	DATE	DESCRIPTION

DRAWN BY	RIZ	CHECKED BY	KVR
DATE STARTED	24.01.2013	DATE COMPLETED	
OPRG. DEPT.	CTPD	ENG. DEPT.	AUT-PSAC

27UV1/27UV2 BINARY INPUT
13.8kV UV LOAD SHEEDING PANEL +UVLS
S/S 8709 - 132/13.8KV IN AL-KHARJ CITY
RIYADH SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء National Grid sa				
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	
-	C421	CD-322968	SHT	CONT.
			222	222A
			REV. NO.	
			02	



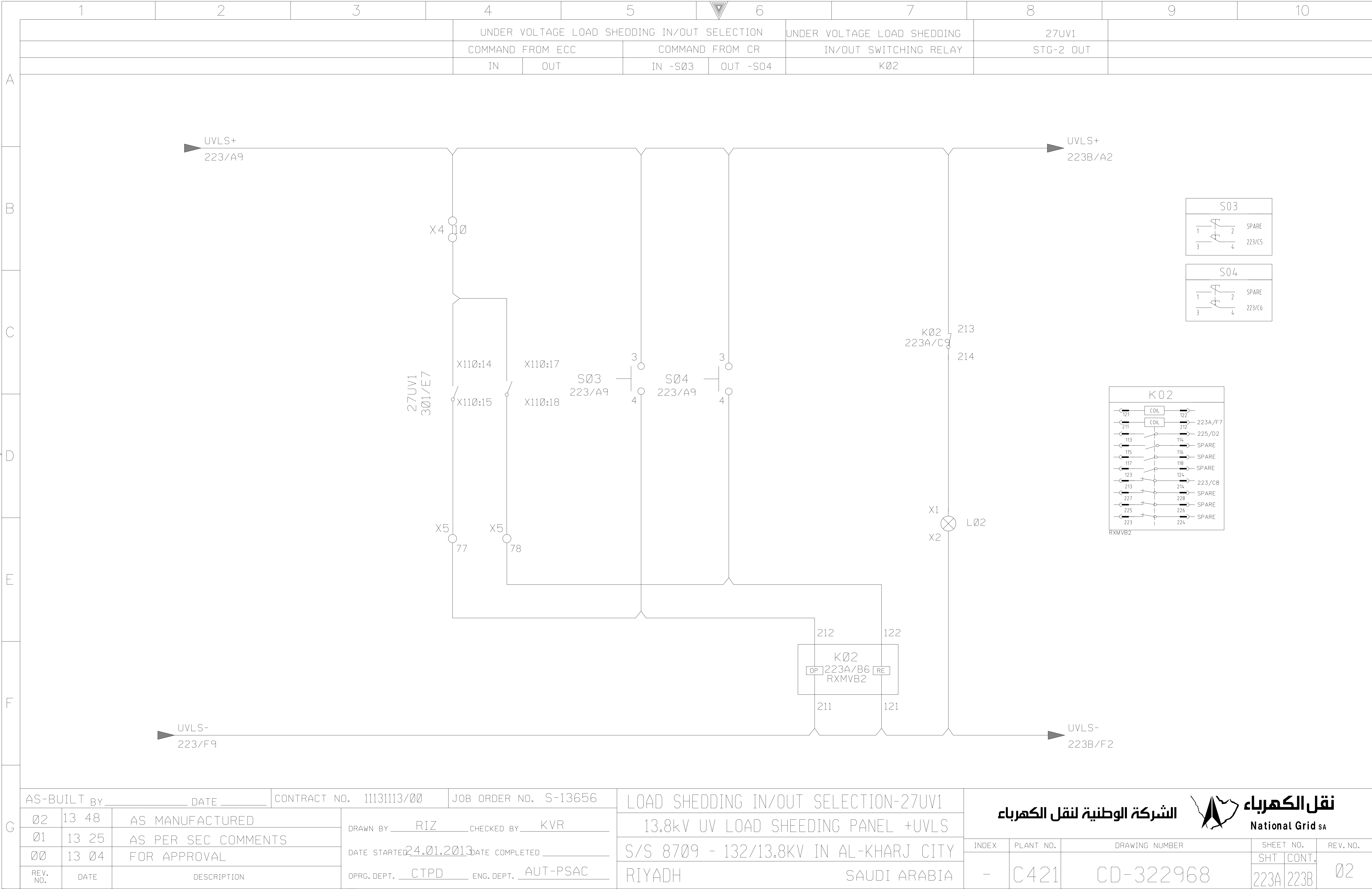
AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131113/00 JOB ORDER NO. S-13656

02	13 48	AS MANUFACTURED
01	13 25	AS PER SEC COMMENTS
00	13 04	FOR APPROVAL
REV. NO.	DATE	DESCRIPTION

DRAWN BY RIZ CHECKED BY KVR
DATE STARTED 24.01.2013 DATE COMPLETED _____
OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC

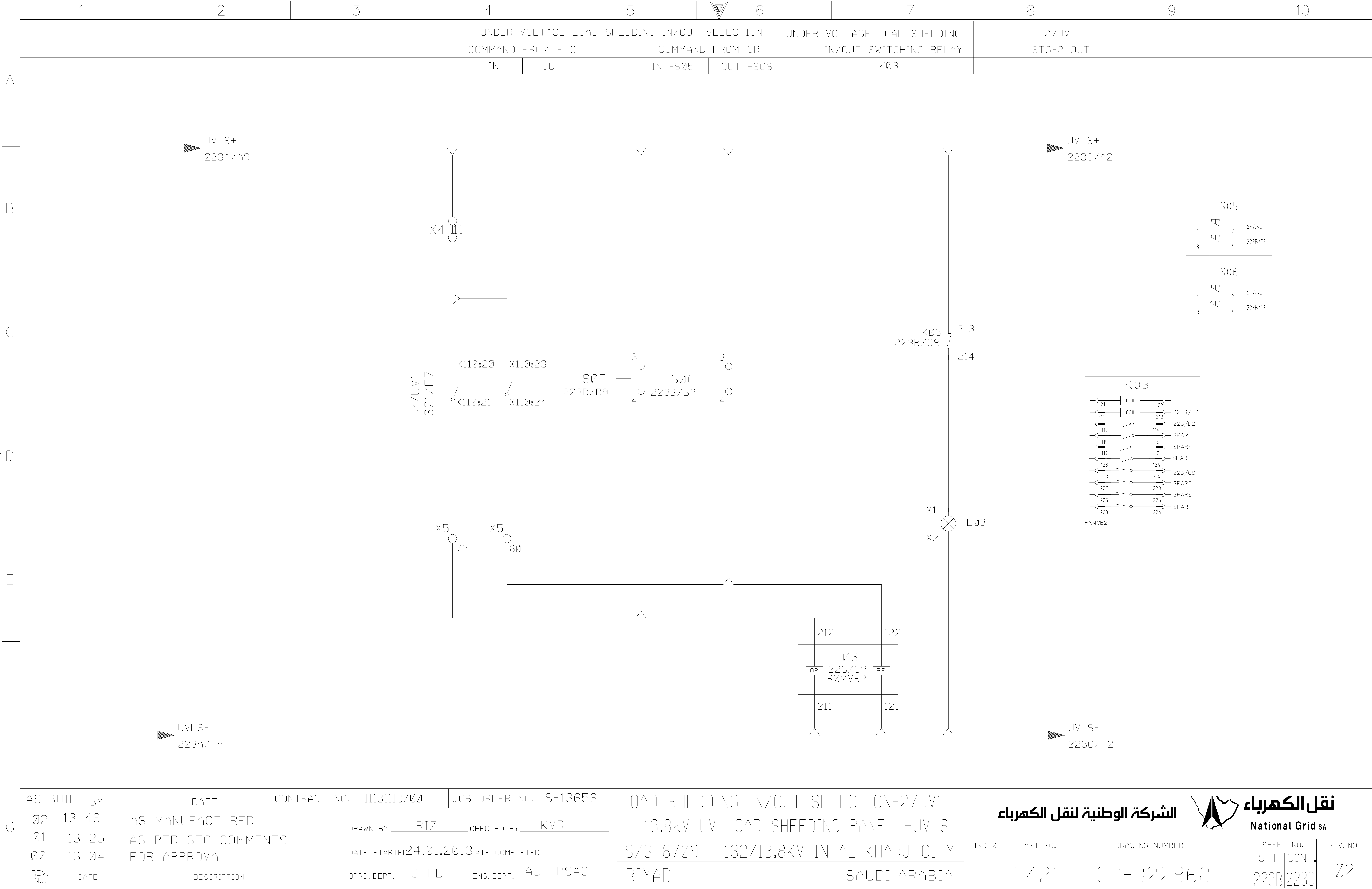
27UV1/27UV2 BINARY INPUT
13.8kV UV LOAD SHEEDING PANEL +UVLS
S/S 8709 - 132/13.8KV IN AL-KHARJ CITY
RIYADH SAUDI ARABIA


الشركة الوطنية لنقل الكهرباء National Grid sa				
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	
-	C421	CD-322968	SHT	CONT.
			222A	223
			02	

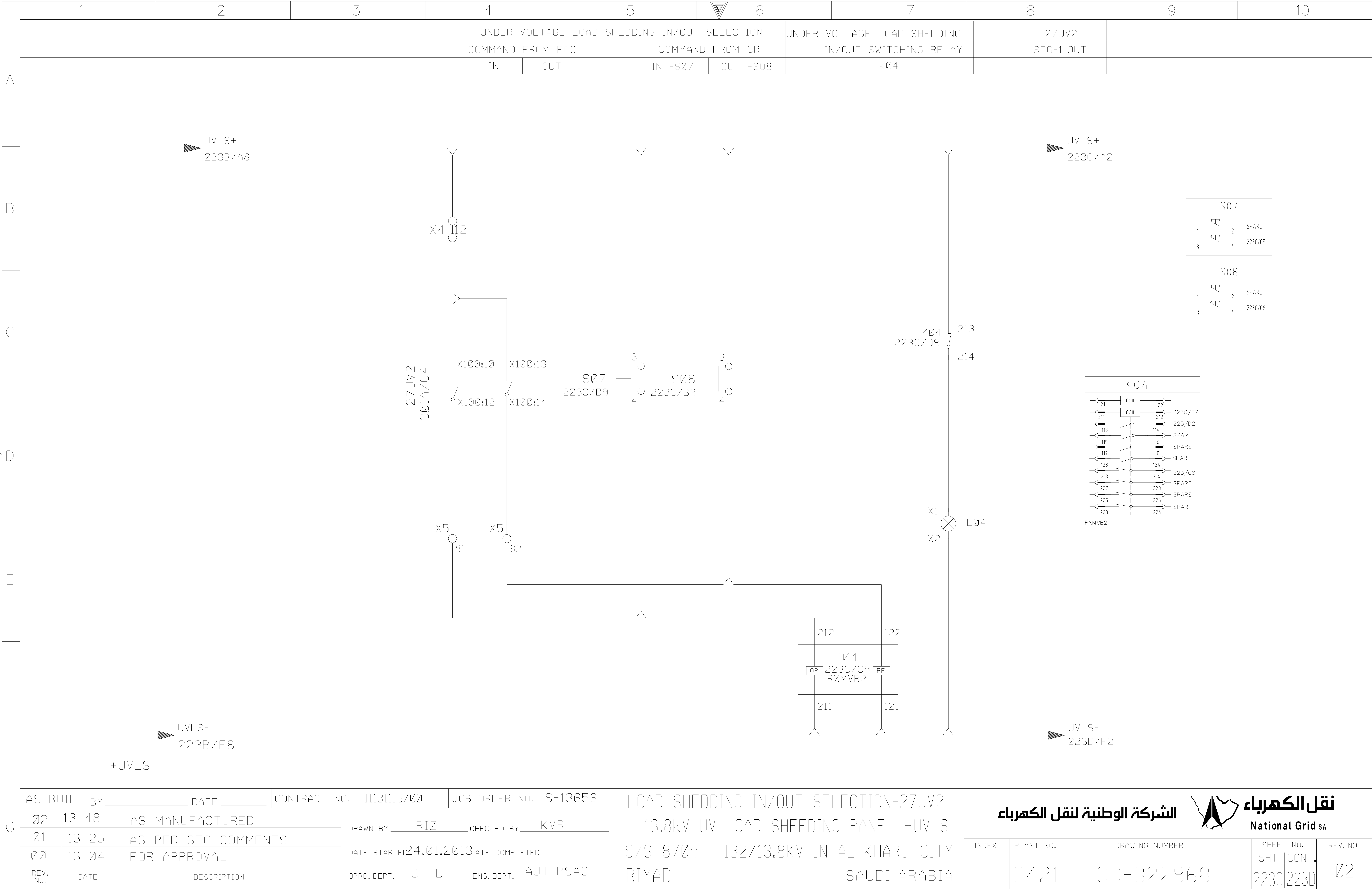


G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LOAD SHEDDING IN/OUT SELECTION-27UV1		<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>						
	02	13 48	AS MANUFACTURED		DRAWN BY RIZ CHECKED BY KVR		13.8kv UV LOAD SHEEDING PANEL +UVLS								
	01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013 DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY								
	00	13 04	FOR APPROVAL		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
	REV. NO.	DATE	DESCRIPTION						-	C421	CD-322968		SHT	CONT.	02

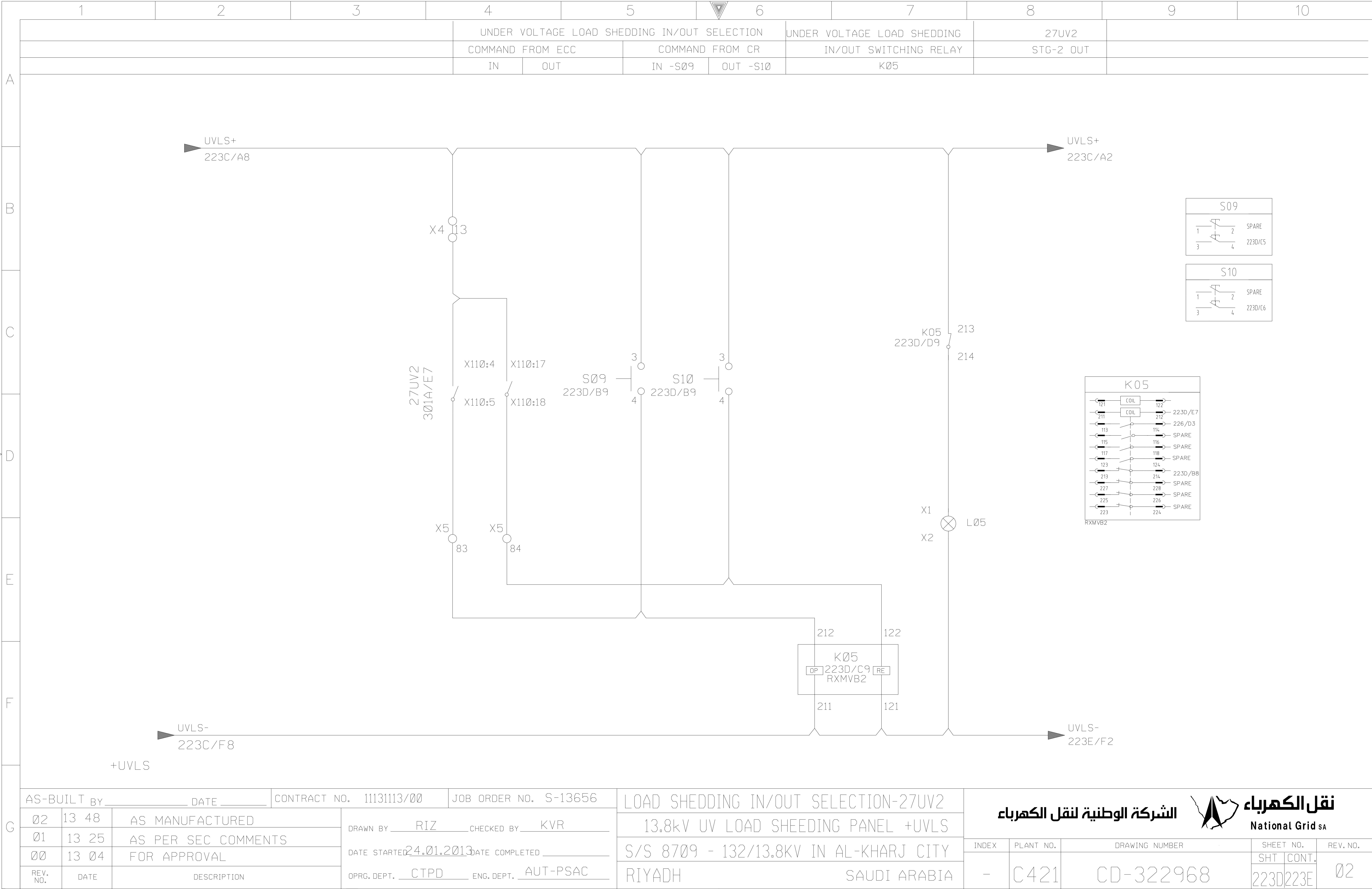
223A	223B	02
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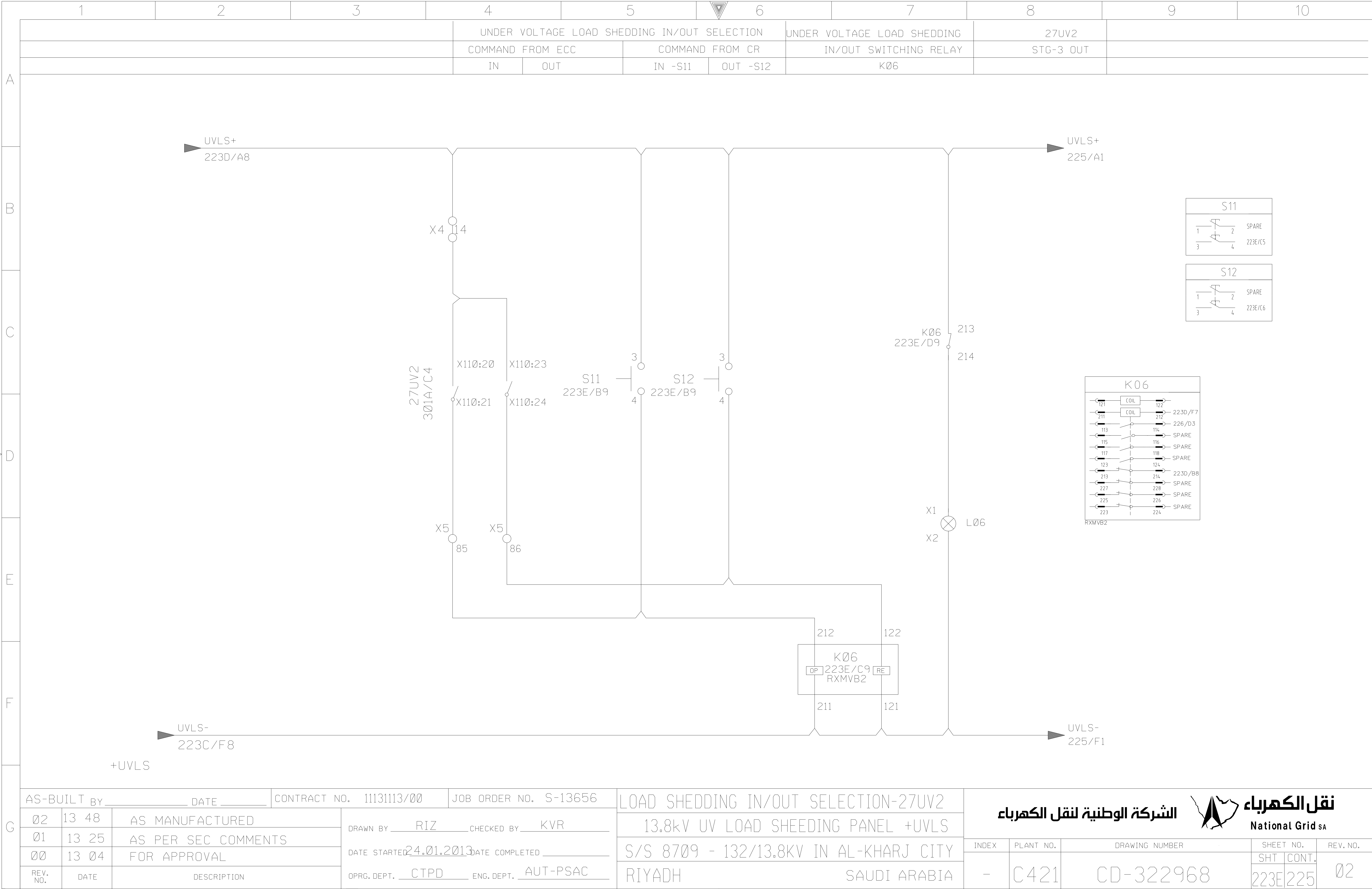
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	02	13 48	AS MANUFACTURED		DRAWN BY RIZ		CHECKED BY KVR		13.8kv UV LOAD SHEEDING PANEL +UVLS								
	01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013		DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY								
	00	13 04	FOR APPROVAL		OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA								
	REV. NO.	DATE	DESCRIPTION								INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
										-	C421	CD-322968		SHT 223B		CONT. 223C	02




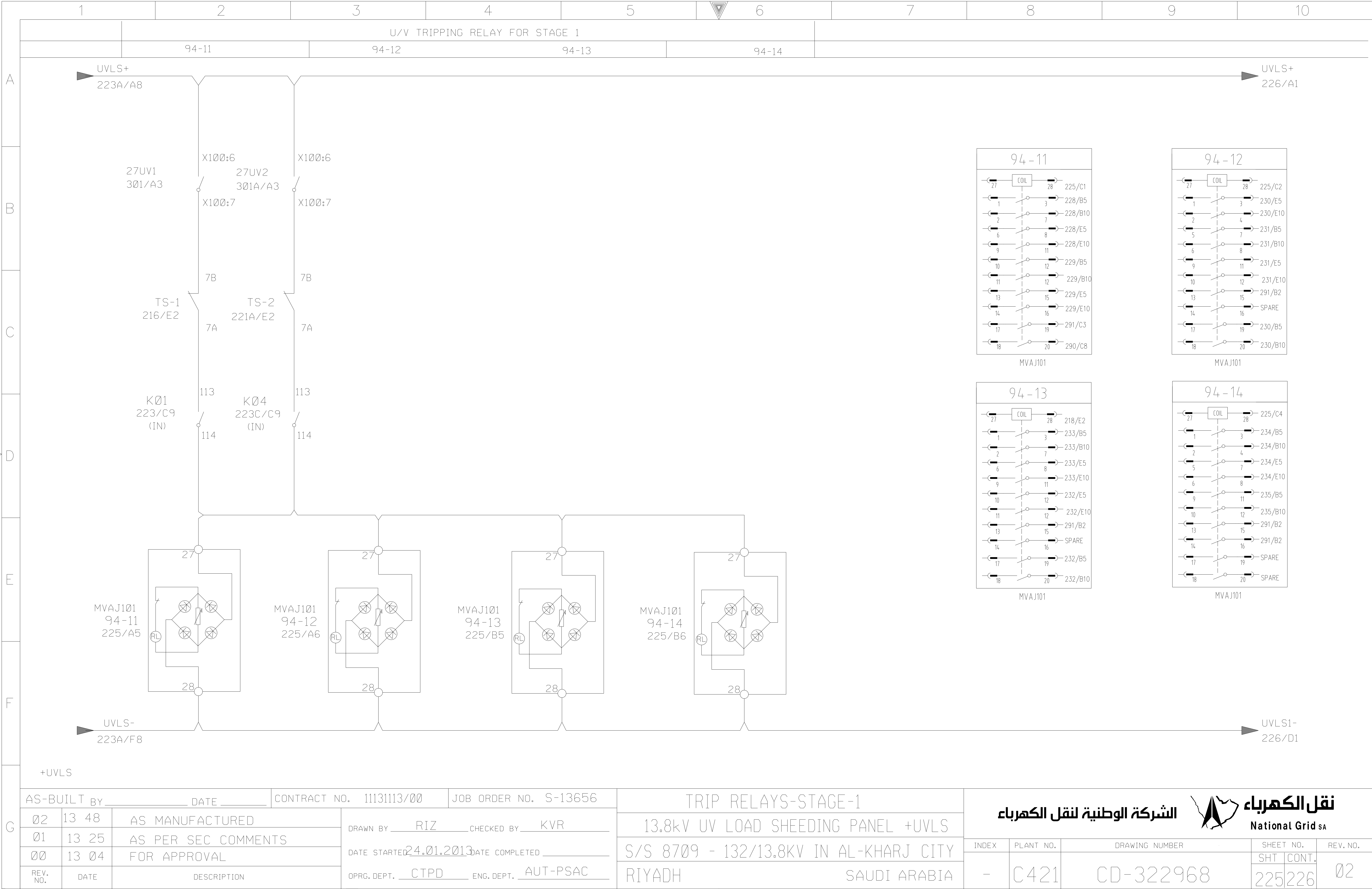
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	02	13 48	AS MANUFACTURED		DRAWN BY RIZ		CHECKED BY KVR		13.8kv UV LOAD SHEEDING PANEL +UVLS							
	01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013		DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY							
	00	13 04	FOR APPROVAL		OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA							
	REV. NO.	DATE	DESCRIPTION								INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.	
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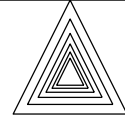
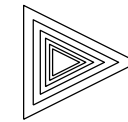
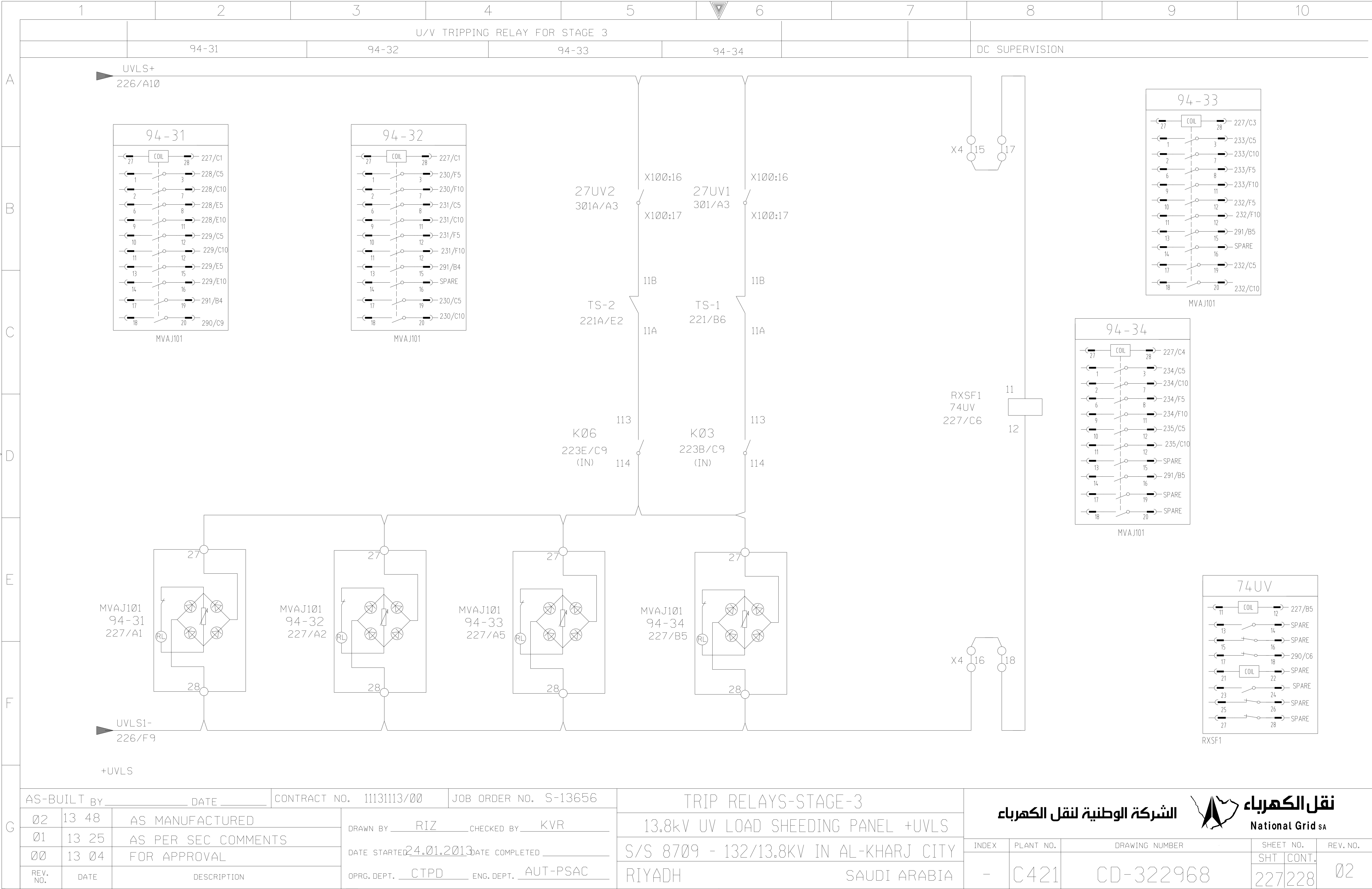
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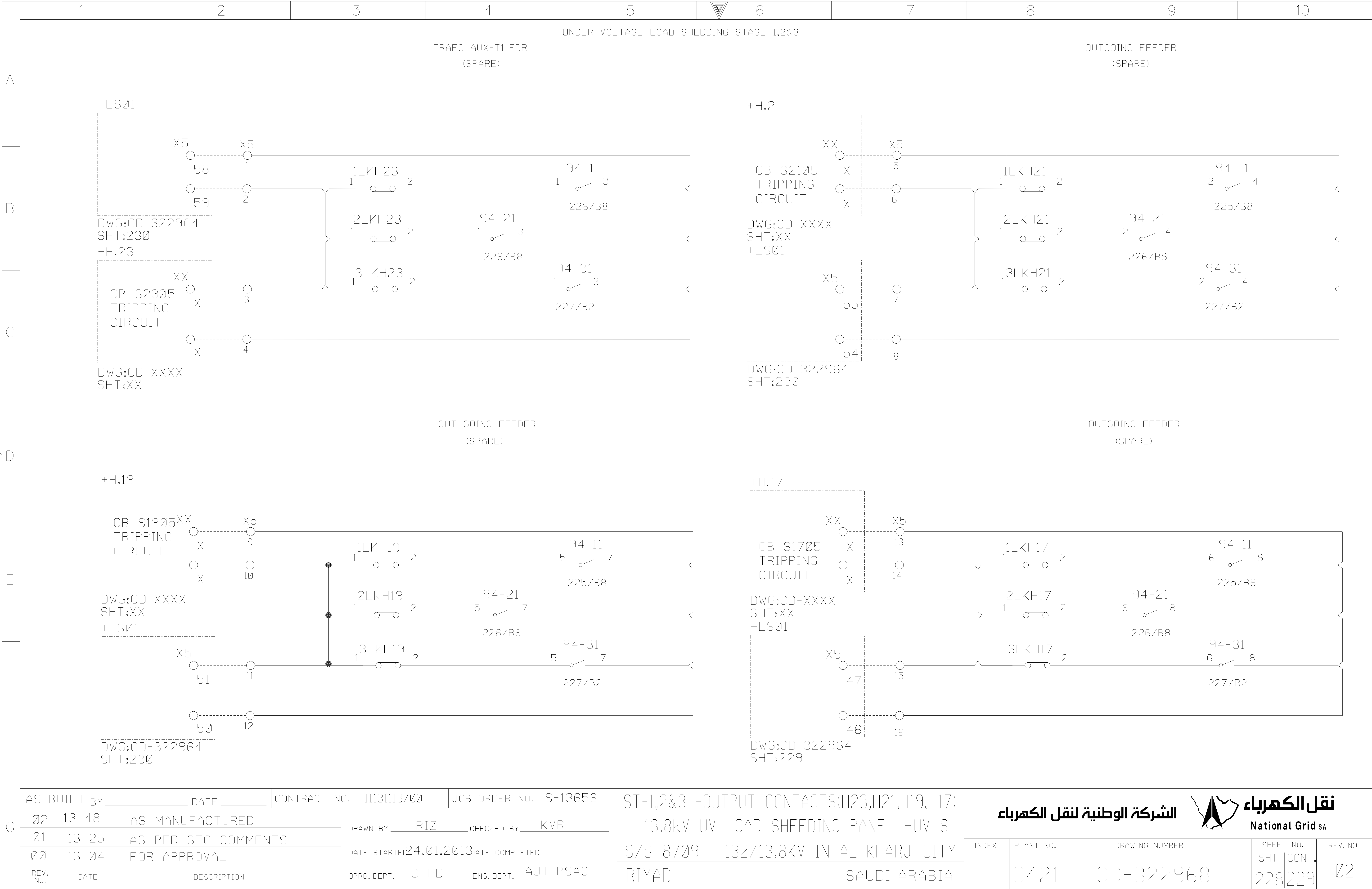
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	02	13 48	AS MANUFACTURED		DRAWN BY RIZ		CHECKED BY KVR		13.8kv UV LOAD SHEEDING PANEL +UVLS								
	01	13 25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013		DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY								
	00	13 04	FOR APPROVAL		OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
	REV. NO.	DATE	DESCRIPTION								-	C421	CD-322968		SHT 223E	CONT. 225	02



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CB S23Ø5

TRIPPING

CIRCUIT

XX

X

DWG:CD-322964

SHT:23Ø

+H.23

X

59

2

X

4

+H.21

XX

X

CB S21Ø5

TRIPPING

CIRCUIT

XX

X

DWG:CD-XXXX

SHT:XX

+LSØ1

X5

55

7

X5

54

8

1LKH21

1

2

94-11

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4

225/B8

2LKH21

1

2

94-21

2

4

226/B8

3LKH21

1

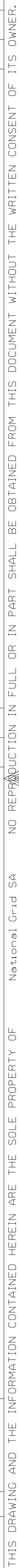
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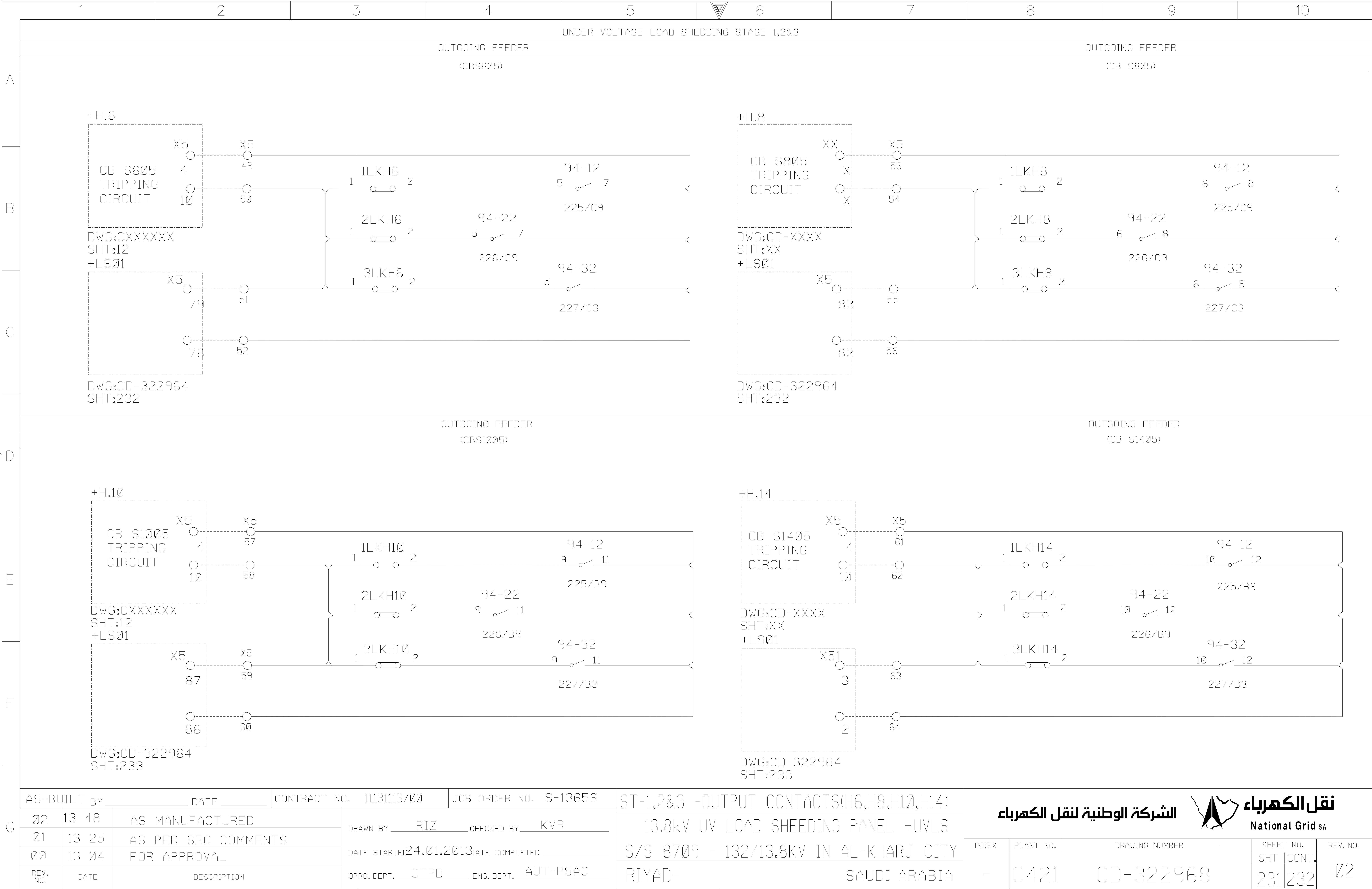
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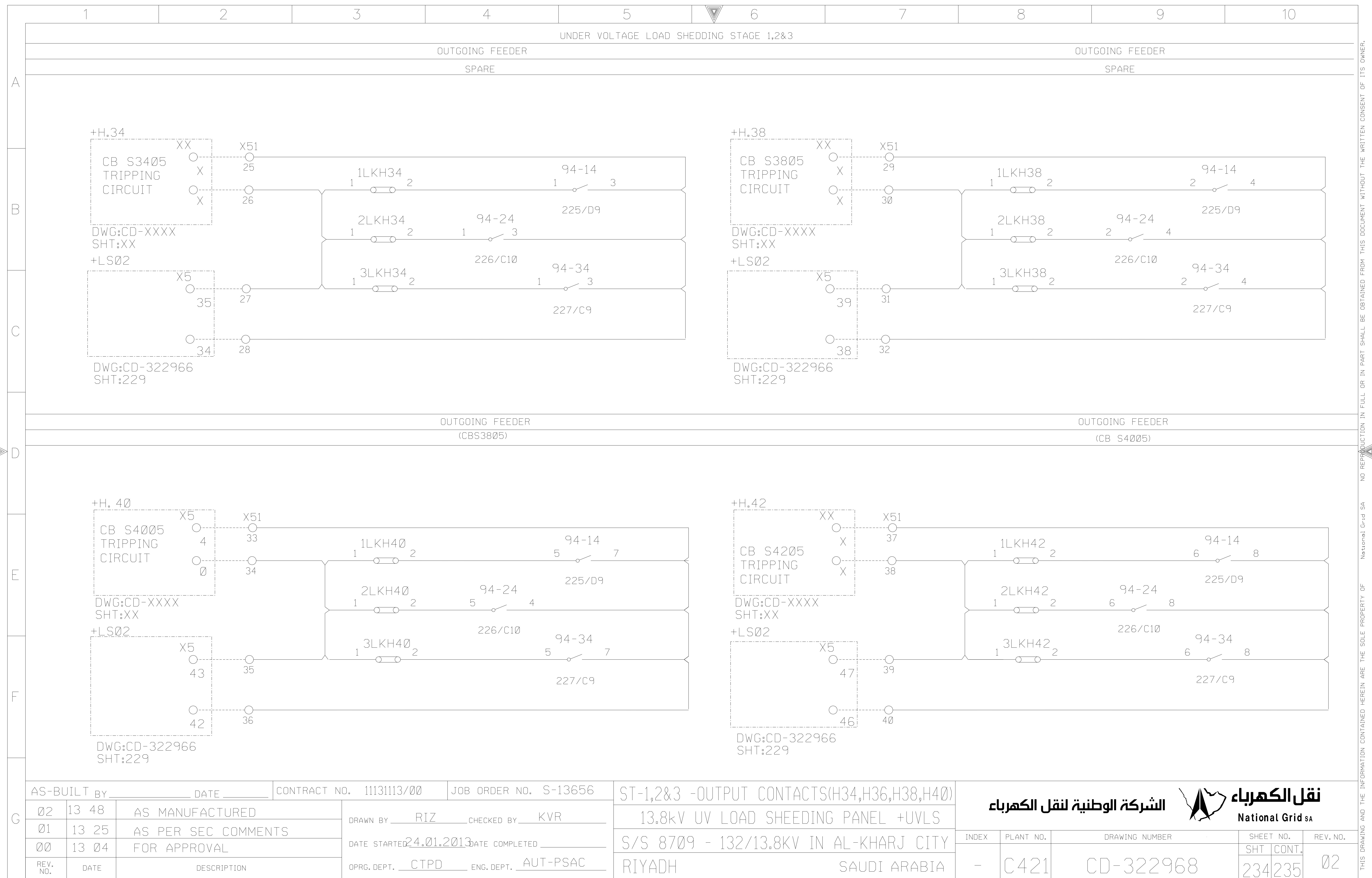
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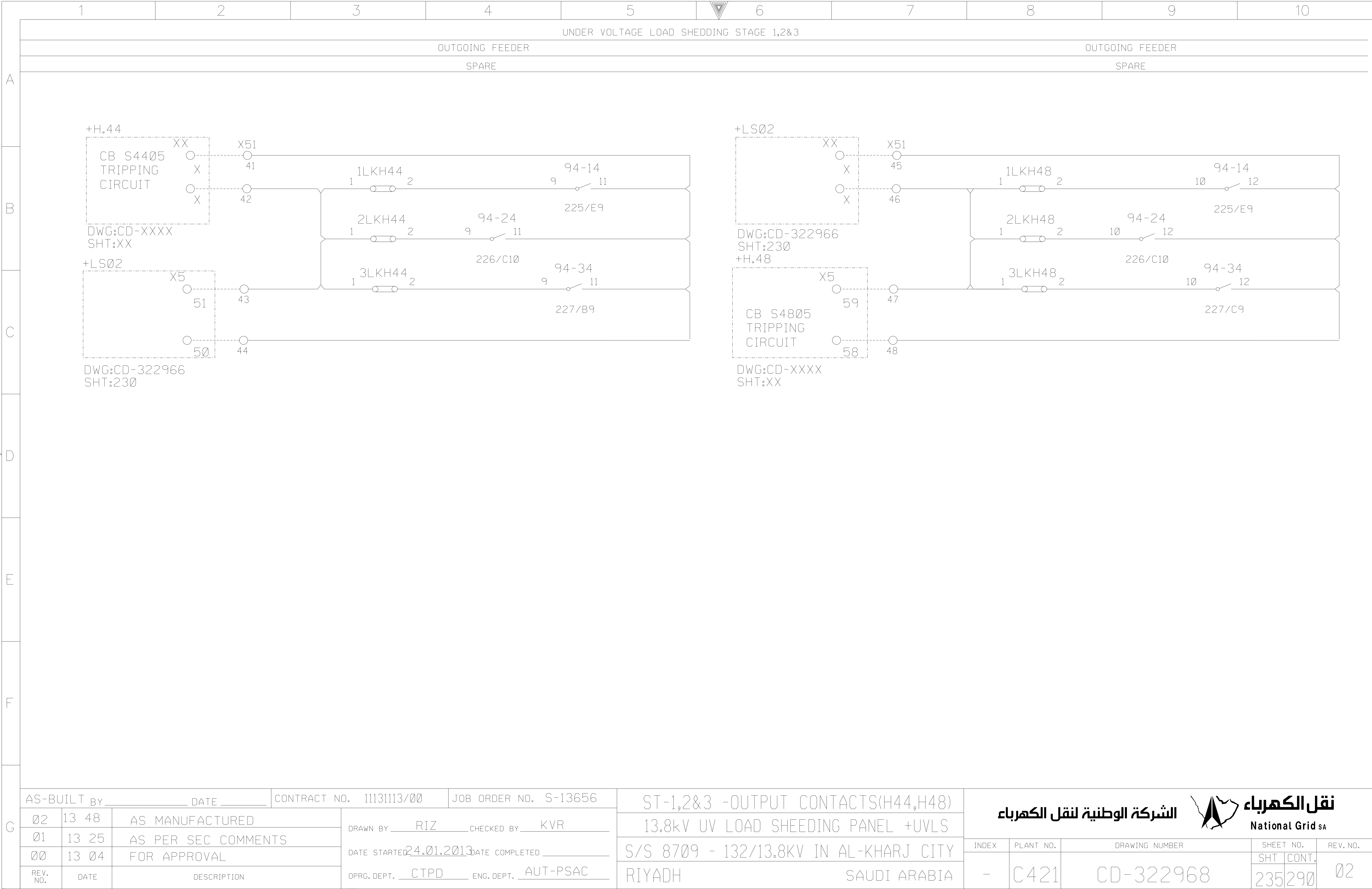
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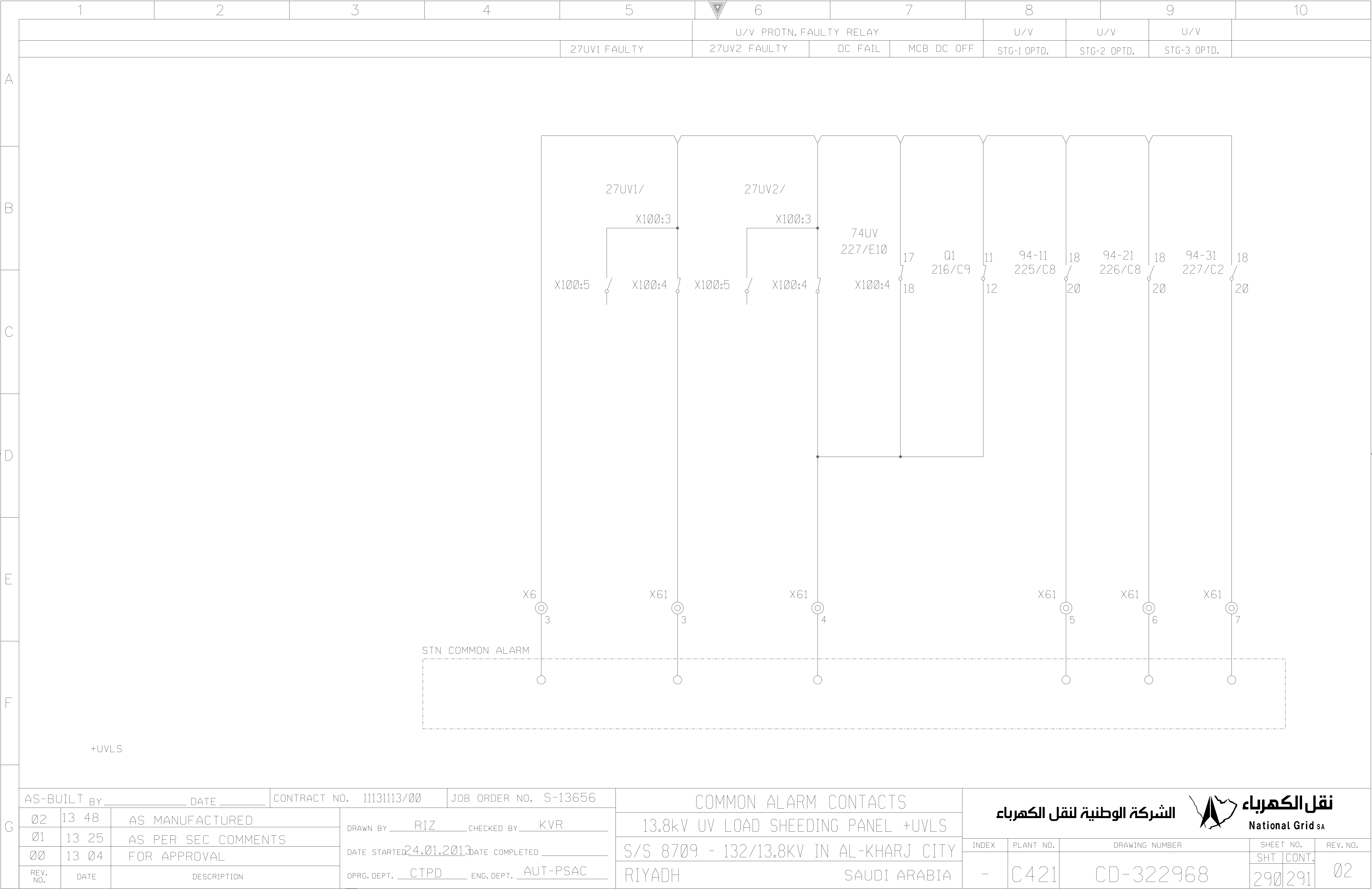
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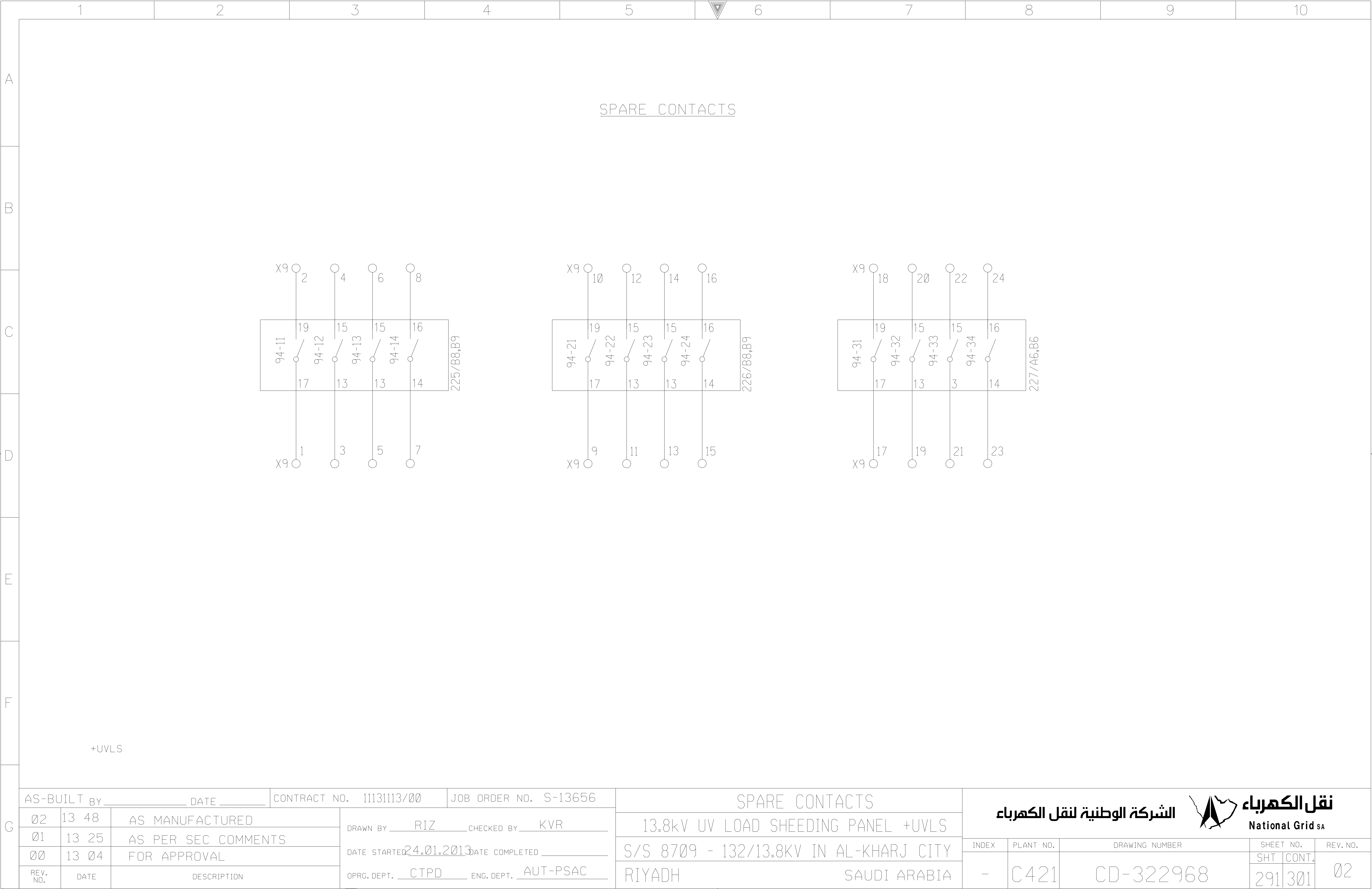
DMS

VECTOR

NG/D2-D (2012/01)

NGD200

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+UVLS

AS-BUILT BY _____ DATE _____

CONTRACT NO. 11131113/00

JOB ORDER NO. S-13656

02

13 48

AS MANUFACTURED

01

13 25

AS PER SEC COMMENTS

00

13 04

FOR APPROVAL

REV. NO.

DATE

DESCRIPTION

DRAWN BY _____ RIZ _____ CHECKED BY _____ KVR _____

DATE STARTED 24.01.2013

DATE COMPLETED _____

OPRG. DEPT. _____ CTPD _____

ENG. DEPT. _____ AUT-PSAC _____

SPARE CONTACTS

13.8kV UV LOAD SHEEDING PANEL +UVLS

S/S 8709 - 132/13.8KV IN AL-KHARJ CITY

RIYADH SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء

نقل الكهرباء

National Grid sa

INDEX

PLANT NO.

DRAWING NUMBER

SHEET NO.

REV. NO.

-

C421

CD-322968

291301

02

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A

B

C

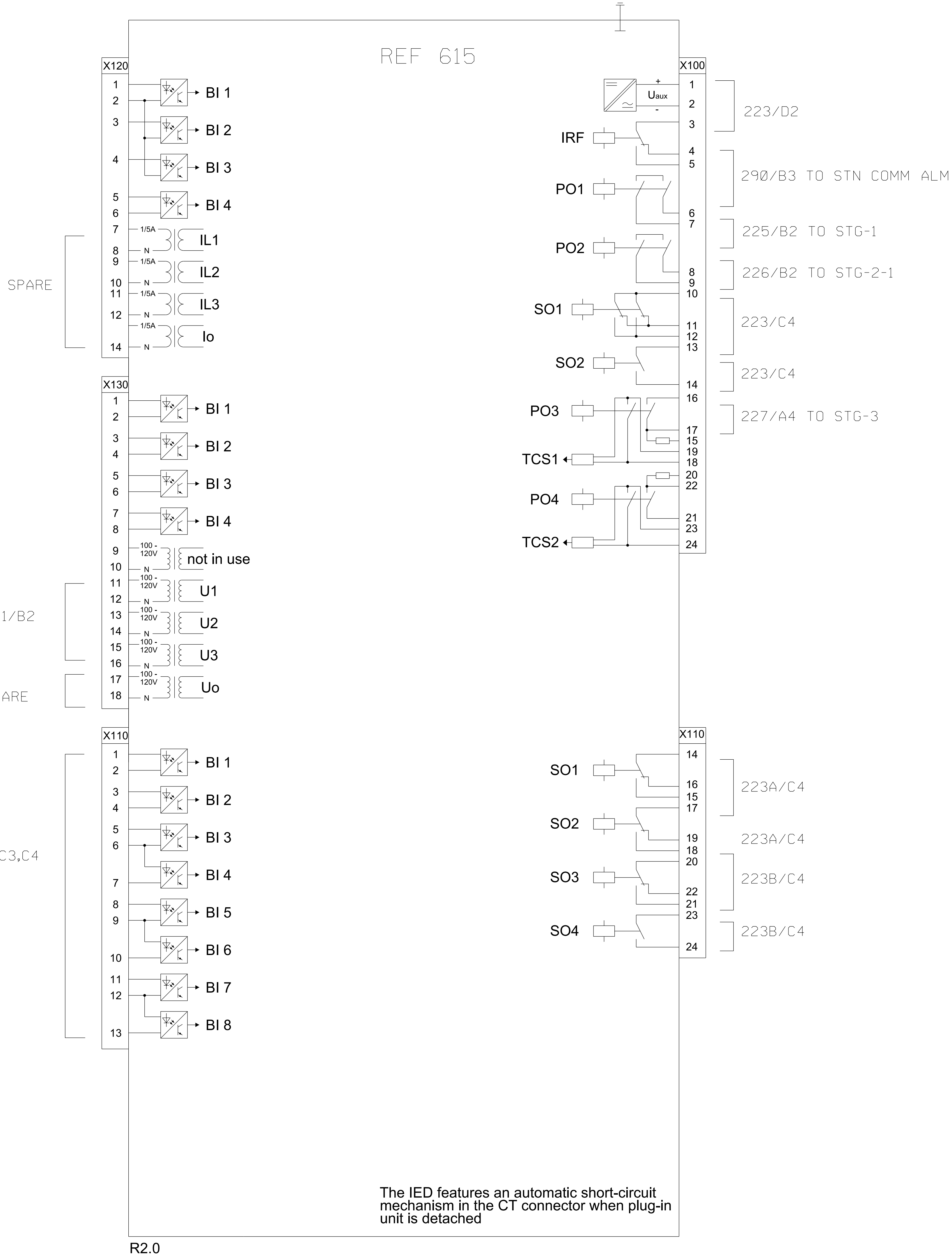
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E

F

G

27UV1



AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656	
02	13 48	AS MANUFACTURED	DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u>			
01	13 25	AS PER SEC COMMENTS	DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____			
00	13 04	FOR APPROVAL	OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>			
REV. NO.	DATE	DESCRIPTION				

BLOCK REFERENCE	
13.8kV UV LOAD SHEEDING PANEL +UVLS	
S/S 8709 - 132/13.8KV IN AL-KHARJ CITY	
RIYADH SAUDI ARABIA	

الشركة الوطنية لنقل الكهرباء			 نقل الكهرباء National Grid sa		
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.		REV. NO.
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A

B

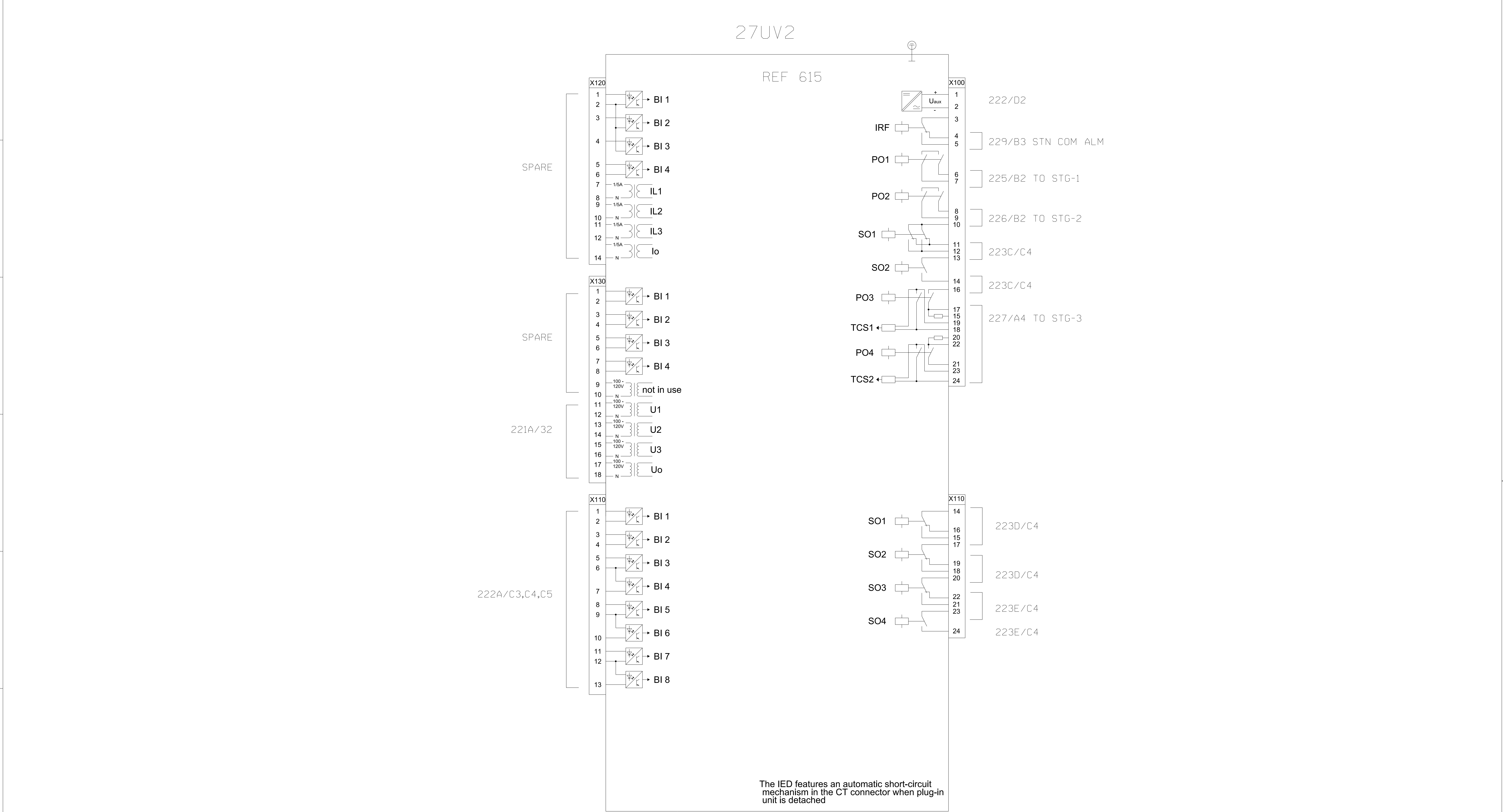
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D

E

F

G



AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		BLOCK REFERENCE		<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>				
02	13	48	AS MANUFACTURED		DRAWN BY _____ RIZ _____ CHECKED BY _____ KVR								
01	13	25	AS PER SEC COMMENTS		DATE STARTED 24.01.2013 DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY						
00	13	04	FOR APPROVAL				RIYADH SAUDI ARABIA						
REV. NO.	DATE		DESCRIPTION		OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC								
INDEX	PLANT NO.		DRAWING NUMBER		SHEET NO.		REV. NO.						
-	C421		CD-322968		SHT 301A		CONT. 302						
								02					

	1	2	3	4	5	6	7	8	9	10																				
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	211/B3		5		221C/A3		5		222/C6		5		232/E7		5		228/B7		5		231/C7		55							
	211/B8		6		222/B7		6		222/C6		6		232/F7		6		228/C7		6		231/E2		56							
	211/B3		7		222A/B6		7		222/C8		7		233/B2		7		228/C7		7		231/E2		57							
	211/B8		8		223A/B4		8		SPARE		8		233/B2		8		228/E2		8		231/F2		58							
	SPARE		9		223B/B4		9		SPARE		9		233/C2		9		228/E2		9		231/E7		59							
	SPARE		10		223C/B4		10		SPARE		10		233/B7		10		228/E2		10		231/F2		60							
C	INTERNAL REFERENCE		XSH SPACE HEATER		SPARE		17		SPARE		17		233/E2		17		228/E7		17		231/E7		61							
	211/E7		1		SPARE		18		SPARE		18		233/E2		18		228/E7		18		231/F7		62							
	211/E7		2		SPARE		19		SPARE		19		233/F2		19		229/B3		19		231/F7		63							
	INTERNAL REFERENCE		XTJ T.JACK		SPARE		20		SPARE		20		233/C7		20		229/B3		20		232/B2		64							
	211/C3		1		SPARE		21		SPARE		21		233/C7		21		229/B3		21		232/B2		65							
	211/C3		2		SPARE		22		SPARE		22		233/E7		22		229/B3		22		232/C2		66							
	211/D3		3		SPARE		23		SPARE		23		233/E7		23		229/B3		23		232/C2		67							
	211/D3		4		SPARE		24		SPARE		24		233/F7		24		229/B3		24		232/C2		68							
D	INTERNAL REFERENCE		X61 LOCAL ALARM		SPARE		25		SPARE		25		233/F7		25		229/B3		25		232/C2		69							
	212/D5		1		SPARE		26		SPARE		26		234/B2		26		229/B3		26		232/C2		70							
	212/D5		2		SPARE		27		SPARE		27		234/B2		27		229/B3		27		232/C2		71							
	SPARE		3		SPARE		28		SPARE		28		234/B2		28		229/B3		28		232/C2		72							
	SPARE		4		SPARE		29		SPARE		29		234/B2		29		229/B3		29		232/C2		73							
	SPARE		5		SPARE		30		SPARE		30		234/B2		30		229/B3		30		232/C2		74							
	SPARE		6		SPARE		31		SPARE		31		234/B2		31		229/B3		31		232/C2		75							
	SPARE		7		SPARE		32		SPARE		32		234/B2		32		229/B3		32		232/C2		76							
	SPARE		8		SPARE		33		SPARE		33		234/B2		33		229/B3		33		232/C2		77							
	SPARE		9		SPARE		34		SPARE		34		234/B2		34		229/B3		34		232/C2		78							
	SPARE		10		SPARE		35		SPARE		35		234/B2		35		229/B3		35		232/C2		79							
E	INTERNAL REFERENCE		X6 CONTROL & PROTN.		SPARE		36		SPARE		36		234/B2		36		229/B3		36		232/C2		80							
	212/B5		1		SPARE		37		SPARE		37		234/B2		37		229/B3		37		232/C2		81							
	212/B6		2		SPARE		38		SPARE		38		234/B2		38		229/B3		38		232/C2		82							
	SPARE		3		SPARE		39		SPARE		39		234/B2		39		229/B3		39		232/C2		83							
	SPARE		4		SPARE		40		SPARE		40		234/B2		40		229/B3		40		232/C2		84							
	294/C3		5		SPARE		41		SPARE		41		234/B2		41		229/B3		41		232/C2		85							
F	INTERNAL REFERENCE		X6 CONTROL & PROTN.		SPARE		42		SPARE		42		234/B2		42		229/B3		42		232/C2		86							
	212/B5		1		SPARE		43		SPARE		43		234/B2		43		229/B3		43		232/C2		87							
	212/B6		2		SPARE		44		SPARE		44		234/B2		44		229/B3		44		232/C2		88							
	SPARE		3		SPARE		45		SPARE		45		234/B2		45		229/B3		45		232/C2		89							
	SPARE		4		SPARE		46		SPARE		46		234/B2		46		229/B3		46		232/C2		90							
	294/C3		5		SPARE		47		SPARE		47		234/B2		47		229/B3		47		232/C2		91							
G	AS-BUILT BY		DATE		CONTRACT NO.		11131113/00		JOB ORDER NO.		S-13656		TERMINAL BLOCK ALLOCATION		13.8kV UV LOAD SHEEDING PANEL +UVLS		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY		SAUDI ARABIA		INDEX		PLANT NO.		DRAWING NUMBER		SHEET NO.		REV. NO.	
	02		13 48		AS MANUFACTURED		DRAWN BY		RIZ		CHECKED BY		KVR		DATE STARTED		24.01.2013		DATE COMPLETED		OPRG. DEPT.		CTPD		ENG. DEPT.		AUT-PSAC		02	
	01		13 25		AS PER SEC COMMENTS		DATE STARTED		24.01.2013		DATE COMPLETED		OPRG. DEPT.		CTPD		ENG. DEPT.		AUT-PSAC		OPRG. DEPT.		CTPD		ENG. DEPT.		AUT-PSAC		02	
	00		13 04		FOR APPROVAL		DATE STARTED		24.01.2013		DATE COMPLETED		OPRG. DEPT.		CTPD		ENG. DEPT.		AUT-PSAC		OPRG. DEPT.		CTPD		ENG. DEPT.		AUT-PSAC		02	
	REV. NO.		DATE		DESCRIPTION		DATE STARTED		24.01.2013		DATE COMPLETED		OPRG. DEPT.		CTPD		ENG. DEPT.		AUT-PSAC		OPRG. DEPT.		CTPD		ENG. DEPT.		AUT-PSAC		02	

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